


CONNECTED

Connecting Higher Education to Business in Ohio



Columbus State to lead national IT innovation center

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A Message from Chancellor Randy Gardner

Fall is definitely a busy time at our colleges and universities, with a new school year getting under way, students going from dorm room to classroom, and campuses bustling with activity.

But for those who are working to prepare those students and ensure a skilled workforce for our state in the years to come, it's always a busy season.

In this issue of ConnectED, we get just a sample of the effort to prepare Ohio's students for success in an ever-changing world. Our cover story features Columbus State Community College and its work to lead a national IT innovation center. We also look at a partnership between Sinclair College and Wright-Patt to help students develop culinary and business skills by operating a food truck.

Elsewhere, a collaboration between Central State University and the University of Akron will help students striving to earn their Juris Doctor degree, and a state grant is helping the University of Cincinnati continue research into improving protective gear for firefighters.

Personally, after overseeing the beginning of five fall semesters, this one will be my last as Chancellor. And although I have announced plans to leave the Governor's cabinet as Chancellor at the end of the year, I don't expect to be leaving education entirely. As I like to say, "New Chapter. Same Passion." My interest in student success and a stronger Ohio will ensure that I find ways to stay ConnectED.

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Columbus State to lead national IT innovation center

\$7.5 million grant will spur training for in-demand IT careers and fuel rapid job growth

Through a \$7.5 million federal grant, Columbus State Community College will launch a new center focused on creating and scaling up the high-demand training needed to fuel the country's technology-enabled economic growth.

The National Information Technology Innovation Center (NITIC) will work with employers, community colleges across the country, and others to prepare highly skilled technicians through credential programs that take two years or less. Columbus State is the lead institution in the NITIC, joined by partners from Collin College (McKinney, Texas in the Dallas-Fort Worth metroplex), Lone Star College (Houston, Texas), Maricopa Community Colleges (Phoenix, Arizona), and Sinclair College (Dayton, Ohio).

Columbus State assistant professor Larry McWherter will lead the National IT Innovation Center initiative. McWherter is a national leader in IT education who was named educator of the year by the High Impact Technology Exchange Conference in 2022.

Funded through the National Science Foundation as part of its Advanced Technological Education (ATE) program, the NITIC will be the sole ATE national center focused on IT education. There is enormous demand for IT training, as technician jobs in STEM-enabled industries are expected to grow at double the pace of average U.S. job growth over the next 10 years.



Columbus State assistant professor Larry McWherter, who will lead the National IT Innovation Center initiative, demonstrates biometric cybersecurity interfaces to participants in GenCyber Summer Camp, which recruits high school students to learn more about potential information systems technology careers.

COLUMBUS STATE
COMMUNITY COLLEGE



"NITIC will provide best practices in employer partnerships, adopt new technologies as they emerge, and partner with community colleges to develop a national network that will bring innovative programs to scale, leading to a highly skilled, inclusive, IT workforce."

David Harrison
Columbus State President

"We're pleased to lead the way with the National Information Technology Innovation Center, which will play a crucial role in America's tech economy," said Columbus State President David Harrison. "Employer needs are changing rapidly. NITIC will provide best practices in employer partnerships, adopt new technologies as they emerge, and partner with community colleges to develop a national network that will bring innovative programs to scale, leading to a highly skilled, inclusive, IT workforce."

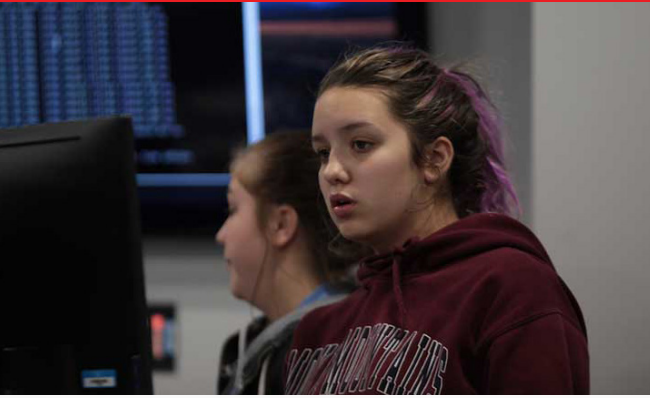
"Columbus State and its NITIC partner institutions bring deep experience advancing IT education outcomes within their respective regions, leveraging both NSF and other innovation funding," said V. Celeste Carter, director of the NSF's ATE program. "The launch of NITIC will support industry need for the skilled technical worker in the rapidly changing U.S. IT industry. NITIC will advance and support IT education by engaging the diverse, dynamic network of community colleges across the country."

With the NITIC grant (NSF-ATE Award Number 2300188), Columbus State has received 16 NSF awards since 2013 – more than any other individual college in the country. Columbus State is also the anchor institution for the Columbus Workforce Hub, reflecting the college's central role supporting growth and economic mobility in the region. The Columbus hub is one of five that the White House has designated.

"Each institution in this partnership brings deep experience and success to advance IT training outcomes in our home regions," said McWherter. "Equally important in our world of constant challenge and change, we're closely aligned with employer partners who help us meet the needs of our current and future workforce. I'm excited to combine our strength toward the common goals of provisioning and strengthening the nation's IT workforce as a critical asset."



National Science Foundation funding has been an integral part of building Columbus State's IT Flexible Apprenticeship program, which embeds learn-and-earn workforce experience into degree attainment, and typically results in full-time employment upon graduation. Former student Garret Braxton, pictured, leveraged his experience within ITFA to become a software engineer after completing his associate degree.



Hosting white hat hacking challenges such as Capture the Flag cybersecurity events for young people is one example of Columbus State's promotion of the real-world career applicability of information systems technology programs.

McWherter has led multiple NSF grants focused on developing the cybersecurity program at Columbus State, associated talent pipelines, and expanding IT career pathways through apprenticeships with industry. These efforts contributed to Columbus State's designation as a Center of Academic Excellence in Cyber Defense Education by the National Security Agency.

The NITIC grant is awarded for five years, with a potential renewal for a second five-year term.

Key components of the NITIC include:

- The development of a national Business Industry Leadership Team to align future community college curriculum with employer demand, scaling up relationships at super-regional levels to national collaboration.
- The creation of an IT Innovation Network to benchmark best practices and emerging ideas to advance IT education nationally, which will serve as an incubator for leading-edge curriculum.
- The syndication of instructor training resources to address current and future IT competencies.
- The promotion of recruitment best practices to increase the participation of women, underrepresented minorities, and veterans in IT careers.

"This is a big moment," said Gloria Rogiers, Columbus State's Information Systems Technology dean. "NSF is counting on us to deliver based on our track record of success. I'm confident the NITIC will be a game-changer in meeting the needs of our country's economic future."

For more information on the launch of NITIC, contact **Shane Kirby**, Columbus State director for advancement partnerships.



CENTRAL STATE UNIVERSITY AND AKRON LAW ESTABLISH J.D. PROGRAM

The University of Akron School of Law (Akron Law) and Central State University have announced a degree partnership to create a seamless, sequential system for students to obtain both a bachelor's degree from Central State and a Juris Doctor (J.D.) from Akron Law in just six years instead of the usual seven.

The partnership, commonly referred to as a three plus three (3+3) degree program, offers an exceptional educational opportunity for qualifying students. Central State becomes the sixth college to have a 3+3 program with Akron Law and the first Historically Black College or University (HBCU) in Ohio to have a 3+3 partnership with any law school.

Pursuant to the agreement, eligible Central State students can apply the first year of law school courses at Akron Law to satisfy the graduation and degree requirements at Central State, and concurrently apply the first year of Akron Law courses toward a J.D. degree granted by the University of Akron.

“Central State University is thrilled to make this opportunity with Akron Law available to our students.

Students who are committed to pursuing a law degree will be able to get a one-year head start on their J.D. after completing three years of a baccalaureate degree.”

Sidney Williams

Director of the Graduate School Preparation Program at Central State



Barbara C. DiGiacomo, Esq., associate dean of administration and enrollment management at the University of Akron School of Law C. Blake McDowell Law Center, and Sidney Williams, director of the Central State University Graduate School Preparation Program, hold a partnership agreement during the launch of the 3+3 program, enabling Central State students to earn a bachelor's degree and Juris Doctor in six years.

“We are delighted to begin this new 3+3 partnership with Central State University,” Akron Law Dean Emily Janoski-Haehlen said. “For eligible students, the program can be a game-changer. The students complete their baccalaureate and J.D. degrees on an accelerated schedule at a substantial cost savings and are able to enter the job market a year earlier than their undergraduate peers.”

Any Central State student may apply for inclusion in the 3+3 program at the same time they apply for admission to Central State or anytime while enrolled at Central State. Central State will have discretion to select which major(s) will be eligible for this program. After completing the application to Akron Law, participants who have completed at least 91 credits toward a bachelor's degree may be automatically admitted to Akron Law if they are in good academic, financial, and disciplinary standing at Central State; satisfy the character and fitness standards required of all students admitted to Akron Law; and meet certain LSAT and grade-point-average standards.

This is the sixth 3+3 program partnership established by Akron Law. In addition, University of Akron students majoring in political science, history, or philosophy may also take advantage of the 3+3 program with Akron Law.

For more information about the Central State University 3+3 J.D. program or any of the other Akron Law 3+3 partnerships, visit uakron.edu/law/admissions or email lawadmissions@uakron.edu.

Ohio Northern University names Civil Engineering Department after Kokosing, Inc.

On Oct. 2, 2023, Ohio Northern University dedicated the Kokosing Department of Civil and Environmental Engineering in the T.J. Smull College of Engineering. Kokosing, Inc. is a renowned Ohio-based, family-owned company with strong connections to the University. The Department of Civil and Environmental Engineering will now include the name Kokosing. Kokosing's gift to the university will support the civil and environmental engineering department as they strive to keep ONU students at the forefront of advances and industry best practices in engineering. Kokosing's support also provides assistance for faculty professional development, student/faculty research, equipment upgrades, and general support for the department.

"We're very thankful for Kokosing's significant investment in our Department of Civil and Environmental Engineering, which will help ensure that our students remain competitive and

at the cutting edge in their engineering fields," said College of Engineering Dean J.D. Yoder, Ph.D.

"We are excited to build upon our long history with ONU. The value of paying it forward to afford students the opportunity for lifelong careers is crucial to the growth of our industry," said Bryce Burgett, co-CEO of Kokosing, Inc. "Kokosing wouldn't be the company it is today without the more than 45 ONU alumni team members who have made significant contributions to our success."

Kokosing and Ohio Northern have shared a long and mutually beneficial partnership. Ohio Northern's College of Engineering has educated industry-prepared civil engineering students who have joined the Kokosing workforce and enjoyed successful careers and advanced with Kokosing's expanding success.



Multiple generations of Burgetts, the family that owns and operates Kokosing, have earned ONU degrees in engineering, business, and other majors, including co-CEO and civil engineer, Bryce Burgett, BSCE '04. Included among the Burgett family owned companies is CK Construction Group. CK Construction is led by CEO Lori (Burgett) Gillett, BSCE '96, who received the T.J. Smull College of Engineering Distinguished Alumni Award in 2022. Earlier this year, Gillett completed her term on the Engineering Advisory Board. Gillett is the first female CEO in the company's history. Brittney (Burgett) Kamenik, BSCE '08 and Brock Burgett, BSCE '12 are among the other family members who earned ONU degrees in engineering. Additional family members who have earned ONU degrees in areas outside of engineering include George Burgett, AA in 1920, Brad Burgett, BA '79, and Mandy (Burgett) Wushinske, BA '98.

Kokosing consistently hires top ONU graduates with the specialized expertise needed to

design, build, and upgrade our country's critical infrastructure: heavy civil, industrial manufacturing and maintenance, marine, power and energy, transportation, water treatment, and more.

Bill Burgett and Lester Rinehart started Kokosing in Fredericktown, Ohio, in 1951. Since then, the company has grown to become one of the largest family-owned construction companies in the Midwest and Mid-Atlantic, with \$1.8 billion in annual revenue and 4,000 employees. Its primary business lines include industrial, transportation, pipelines, water and wastewater, marine and renewable energy. It also owns construction material companies.

"As an industry dominator with a remarkably successful history of bold expansion and innovation, Kokosing sets the success standards for our students and our university community," said Yoder.

State grant allows for UC's continued research on firefighter protective gear

Ohio Bureau of Workers Compensation awards researchers more than \$2.5 million

By Angela Koenig

A team of UC researchers across three colleges has been awarded an additional \$1.5 million state grant to continue research on improving firefighter protective gear.

In 2022, the Ohio Bureau of Workers' Compensation (BWC) awarded a UC team an initial \$1.2 million to provide proof of concept on the development of a firefighter jacket liner that brings a firefighter's body temperature down through advanced cooling technology and protects the body from other external hazards.

State grant to research and develop

That grant, and the new \$1.5 million grant to carry the proof of concept to commercialization, comes from a BWC Workforce Safety Innovation Center initiative for the benefit of workers employed in various fields including first responders, manufacturing, agriculture, and other sectors requiring additional protection while on the job.

The project, led by Ashley Kubley, associate professor of fashion design in UC's College of Design, Architecture, Art, and Planning (DAAP), includes 20-plus researchers from DAAP and UC's College of Engineering and Applied Science (CEAS) and College of Medicine.

"Today's research is different. As we move into designing a more connected, integrated world of products and systems, we need teams of experts with different expertise, skills, and perspectives to solve these interdisciplinary problems," Kubley said.

Between 2022-23, the team designed, developed, and user-tested its prototype and established its effectiveness for moderating the core body temperatures in firefighters during service by providing on-demand cooling inside their turnout coat. Preliminary findings show that the new garment outperformed the current industry standard turnout coats along several measures



Research team leader Ashley Kubley, an associate professor of fashion design in UC's College of Design, Architecture, Art, and Planning (DAAP). Photo provided by DAAP.



and was effective at reducing firefighter exposure to harmful heat stress and environmental contaminants.

The concept

According to Kubley, the team was able to effectively redesign the thermal and moisture management fabrics that are used in current turnout gear, making them thinner, lighter, and more able to spread heat and wick moisture. A miniaturized wearable cooling system works in tandem with a patented carbon nanotube fabric system to create a cooled microclimate.

The system also provides new shielding, strength, and protective features that have not been available in fire-compliant textile materials for personal protective equipment before. These innovations were developed by the design and engineering teams at UC using resources in the Nanoworld Laboratory in CEAS, the Fashion Technology Center, and Rapid Prototyping Center at DAAP, among others.

“No other type of cooling system of this kind exists for firefighters due to the high barrier for entry into the market. The team is excited to be involved in helping to better protect Ohio firefighters who put their life on the line for us each day,” Kubley said.

Research partners

The team partnered with the National Institute for Occupational Safety and Health National Personal

Protective Technology Laboratory in Pittsburgh, Pennsylvania, to run simulation tests using a thermal, sweating mannequin to validate the system prior to human testing.

The team also partnered with LION Protects, a manufacturer of personal protection equipment in Dayton, Ohio, to test the new materials for compliance with national fire protection agency standards and also to manufacture the fire coat samples in its production facilities.

The team then recruited and tested the design with firefighters from departments around the Cincinnati area. Firefighters participated in ergonomic lab testing in the Biomechanics and Ergonomics Research Laboratory at UC and in live burn training at the Great Oaks Career Campus in Sharonville, Ohio.

Using sensors, the researchers measured heat flux, core body temperature, and heart rate during activity, which allowed the team to evaluate the firefighters' body response to the intervention and environment in real time. Through focus groups, observation, and assessment sessions, they employed user feedback to improve the design and functionality of the intervention for better usability and operation, comfort and protection, and safety.

Featured image at top iStockphoto/Grandfailure

Wright-Patt, Sinclair collaborate to bring food truck lessons to the classroom



By Sarah Amato
88th Air Base Wing Public Affairs



*A worker from the 88th Force Support Squadron food truck "On the Run" serves lunch to a customer. The 88th Air Base Wing will partner with Sinclair Community College for the next five years to help train its students how to successfully operate a food truck.
(U.S. Air Force photo by R.J. Oriez)*

The 88th Air Base Wing has partnered with Sinclair Community College to offer its students an opportunity to gain the hands-on skills and practice needed to learn how to successfully operate a food truck.

The five-year partnership, which will be overseen by 88th Force Support Squadron and the Dayton-area academic institution, begins in January with Sinclair culinary students learning the fundamental skills needed for successful food truck operation. All tactical training outside the classroom will take place on base utilizing the 88 FSS food truck.

"This partnership will expose students to hospitality and culinary operations while providing access to a food truck," said Brandon Dixon, chief of the 88 FSS Community Services Flight. "Students will take the lead to develop their own culinary menu and work alongside Force Support Squadron staff to serve their menus at various base locations."

Each class will include eight to 12 Sinclair Hospitality Management Program students who are participating in the college's new food truck program.



The 88th Force Support Squadron 'Food on a Truck' | Dayton Daily News

Along with developing and managing their own menus, students will work with 88 FSS staff to order supplies while also prepping, cooking, and serving their food while the truck is in operation.

Sinclair officials anticipate the collaboration will lead to outstanding benefits for their students and graduates.

“Sinclair Community College is incredibly proud to partner with the 88th Force Support Squadron at Wright-Patterson Air Force Base,” said Erika DeBorde, senior operations manager for Workforce Development at Sinclair. “This partnership enables us to integrate practical, real-world learning into our newly developed food truck program. With the explosive growth of the food industry in recent years, we have designed a comprehensive program to equip students with the skills needed to operate and manage their own food trucks.”

Dixon said the partnership will also provide a “talent pipeline” for base workforce needs after graduation, along with the potential for future apprenticeships and internships.

“This partnership presents an invaluable chance for students to develop a well-rounded understanding of the multifaceted demands of food truck operation,” he said. “It is definitely a win-win effort for both Wright-Patt and Sinclair.”

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

Columbus State to lead national IT innovation center

David Wayne | Communications Coordinator | Columbus State Community College

Central State University and Akron Law establish J.D. program

Debbie Alberico | Interim Director, Public Relations | Central State University

Ohio Northern University names Civil Engineering Department after Kokosing, Inc.

Joy Brown | Associate Director of Media Relations | Ohio Northern University

State grant allows for UC's continued research on firefighter protective gear

Angela Koenig | Public Information Officer | University of Cincinnati

Wright-Patt, Sinclair collaborate to bring food truck lessons to the classroom

Catherine Petersen | Chief of Public Information/President's Office | Sinclair College

Sarah Amato | 88th Air Base Wing Public Affairs

Thanks for reading *ConnectED*. If you have any story suggestions, links to articles of interest, or news releases to share, feel free to send them to Jeff Robinson at jrobinson@highered.ohio.gov.



**Department of
Higher Education**