



The Center to Advance Manufacturing Monthly News

January 2026

Manufacturing remains Ohio's largest economic sector, contributing nearly \$138 billion annually to the state's gross domestic product. But behind that number is something even more critical: a growing need for highly skilled talent.

Today's advanced manufacturing relies on engineers, technologists, and data-savvy professionals as much as it does machine operators or welders. Based on the Georgetown CEW industry projections, roughly 65% of manufacturing job openings through 2031 are expected to require some form of postsecondary education or training, whether vocational credentials, associate degrees, or bachelor's degrees, underscoring the increasing role of postsecondary preparation in the sector.

That's where higher education plays a pivotal role. Colleges and universities are not only preparing students for the next generation of manufacturing careers, they're also helping companies upskill existing workers, solve technical challenges, and stay competitive in a rapidly evolving landscape.

We've seen firsthand how regional partnerships between educators and employers can create pathways that are responsive, inclusive, and grounded in real-world needs. Whether it's through co-ops, short-term training, or applied research, these connections strengthen both our workforce and our economy.

The future of manufacturing isn't just high-tech, it's fueled by continuous learning and collaboration. In this edition, we highlight the continuous role of higher education in strengthening Ohio's manufacturing sector, through collaborative training programs, workforce events, internship initiatives, industry-facing webinars, and student experiences that demonstrate the evolving talent shaping the future of manufacturing.

Upcoming Webinar



CENTER TO
ADVANCE
MANUFACTURING

Lunch & Learn Webinar
Thursday, March 19, 12 PM

THE SPACE IN BETWEEN: MASTERING CHANGE IN FAST-PACED MANUFACTURING

FEATURING:



Steven H. Cady, Ph.D.

Professor & Founding Director
Organization Development & Change Program
Schmidthorst College of Business
Bowling Green State University

[REGISTER HERE](#)

Navigating TechCred and Workforce Resources Employer Workshop

In partnership with Owens Community College and OhioMeansJobs Hancock County, we recently hosted a workforce training session at Owens' Findlay Campus focused on Ohio's TechCred program and regional upskilling resources.

Attendees received step-by-step guidance on applying for TechCred reimbursement, explored additional funding opportunities available through OMJ Hancock County, and learned about customized and CDL training programs offered by Owens. A comprehensive packet of follow-up materials was shared to support implementation and further exploration.

Special thanks to our partners at Owens and OMJ, and to all who participated, for helping strengthen workforce development efforts across Northwest Ohio.

If you weren't able to attend and would like to learn more about the resources shared, please feel free to reach out.



Ohio Export Internship Program

Support international growth while developing future talent through this program, which matches small and medium-sized businesses with college students who have completed export-focused coursework. Participating companies receive a 50% reimbursement of intern wages, making it easier to explore or expand export activities while mentoring emerging professionals.



The program has a strong history of supporting Ohio businesses in building export capacity and creating pathways from internship to full-time employment.

Companies should submit their applications as soon as they can by early February. The commitment to host an export intern would not be until after a meeting between the company supervisor and ODOD's local trade advisor.

Bowling Green State University's Allen W. and Carol M. Schmidthorst College of Business is the only university partner in Northwest Ohio, helping connect regional companies with qualified student interns. Learn more and apply [here](#).

College Technology Internship Program

Access technical talent while reducing internship costs through this program, which supports Ohio technology companies, as well as companies with a defined technology need, by reimbursing up to two-thirds of an intern's wages (maximum \$7,500). These paid internships provide students with hands-on experience while helping employers advance technical, engineering, and innovation-focused projects.

Company applications open from January 5, 2026 through February 27, 2026. For full details, click [here](#).



Individual Microcredential Assistance Program Training Opportunities at Bowling Green State University

Bowling Green State University (BGSU) is an approved provider for Ohio's Individual Microcredential Assistance Program (IMAP), offering industry-recognized training at no cost to eligible Ohio residents through state funding. As an IMAP provider, BGSU covers all training costs, each valued at approximately \$2,500, to help learners build in-demand skills that support career growth or entry into manufacturing and related industries.



The Spring 2026 IMAP trainings are delivered fully online and self-paced across four-week sessions, with optional live trainer office hours and interactive support. Courses available include topics such as Quality Production, Supply Chain Management and Design, Quality Practices and Measurement, Warehouse and Distribution Center Layout, and Manufacturing Process Control.

Explore eligibility requirements and see a full list of active Spring 2026 IMAP trainings [here](#).

Upcoming Artificial Intelligence Class at Owens Community College

Owens Community College is offering a four-part continuing education series designed to help professionals deepen their understanding of artificial intelligence (AI) and put it to practical use.

Artificial intelligence is transforming how we live and work, and this series highlights practical ways to use AI to boost productivity, streamline tasks, and build skills for the future. Classes are \$30 each or \$100 when registering for the full series. All sessions are available in person or virtually.

For additional details and to register, click [here](#).



Business Certificate Offerings at the University of Findlay



University of Findlay

The University of Findlay's College of Business offers two undergraduate certificate programs designed to build practical business skills and foundational leadership abilities for students and working professionals. Both certificates provide focused coursework that complements traditional degree programs or serves as a standalone credential to enhance career readiness.

Applied Leadership & Innovation Certificate

This certificate equips learners with essential leadership and innovation competencies needed in today's business environment. The curriculum emphasizes strategic thinking, effective communication, team collaboration, and creative problem-solving to prepare students to lead with confidence and drive positive change in organizations. Want to learn more? Click [here](#).

Business Essentials Certificate

The Business Essentials Certificate offers foundational training in key areas of business practice, such as management principles, marketing concepts, financial literacy, and organizational operations. Ideal for those seeking a strong grounding in core business functions, this certificate supports career advancement or further academic study. Want to learn more? Click [here](#).

For additional information on the University of Findlay's College of Business, click [here](#).

Impact of Automation, Robots, and Coding Clubs on the Career Choices of Students in STEM Fields

The international robotics market is worth around USD 53.2 billion, with an estimated rise to USD 90 billion, fueled by healthcare, logistics, and manufacturing demand (Kelly, 2025). Industrial use of collaborative robots has increased due to the quest for productivity and labor efficiency by firms. Automation is forecasted to affect about 85 million jobs worldwide across a variety of industries, which has necessitated the need for new skill acquisition (Forum, 2020). Concurrently, labor shortages remain a concern, driving automation, particularly in manufacturing. While demand is increasing, economically disadvantaged students remain underrepresented in STEM education and fields.

Unfortunately, access to high-quality STEM education remains limited for many underserved and low-income students. These students experience limited access to high-quality STEM education, advanced coursework, laboratories, and learning opportunities. These students often demonstrate lower academic performance, weaker STEM identity, and reduced persistence in STEM pathways. However, Self-efficacy, academic hope, and career interest for disadvantaged students were improved by formal mentoring programs, cohort-based models, and hands-on extracurricular STEM activities. Formal mentoring and cohort programs are linked to more robust STEM identity and continuation for disadvantaged students. It can be said that the Mechatronics clubs may address these needs and prepare students for mechatronics-related careers.

Mechatronic Learning and Groups

Mechatronics is an interdisciplinary field that combines mechanics, electronics, and programming, and it offers students meaningful opportunities to connect classroom theory to real-world applications. Outside-of-classroom robotics and automation clubs help to bridge the gap between traditional STEM instruction and authentic learning environments by providing a project-based and collaborative experience. These clubs allow students to design, build, test, and repeat engineering solutions so they foster persistence, confidence, and career focus. However, the direct impact of mechatronics-based clubs on STEM career interest among underrepresented youth contributes most strongly to career intentions. The robotics clubs as a whole are associated with enhanced STEM interest; there is little that is understood about what types of activities influence what outcomes. In general, the issue is with the intersection of limited STEM access among underprivileged youth, the lack of empirical research focused on mechatronics clubs, and the lack of a nuanced understanding regarding how particular extracurricular activities influence STEM career intentions.

This research paper directly addresses vital educational equity disparities in STEM, where underserved students are frequently denied quality teachers, curricula, and out-of-school STEM opportunities. By assessing mechatronics clubs, this study contributes to knowing which particular hands-on activities, such as robotics design, automation activities, and competitions, are motivating STEM career interest, allowing program leaders to optimize effective elements. The study also supports the literature regarding project based learning (PBL) effectiveness in showing that high-quality PBL strongly enhances learning outcomes and equity for diverse and low-income learners. The research informed the development of scalable, extracurricular STEM programs, especially in low-resource environments, matching effective methods including mentorship, peer-to-peer collaboration, and cohort organization. Outcomes are facilitated workforce preparation in high-need technical occupations by improving entry pathways into automation, robotics, and mechatronics professions through greater self-efficacy and career aspiration. Overall, this

research aids in lowering socioeconomic barriers in STEM education, providing a strong evidence base to expand participation in emerging, high-growth areas.

There is a significant positive relationship between participation in mechatronics club activities and students' interest in STEM careers. These findings are expected to indicate improvements in self-efficacy, motivation, engagement, and career readiness. Also, students report that collaborative projects, exposure to real-world tools, mentorship, and industry-aligned practices have strengthened their understanding of STEM careers and helped them envision themselves in technical professions. While challenges such as time management and academic workload are noted, these experiences foster resilience, persistence, and self-management skills.

Conclusion

This study examines the relationship between mechatronics club participation and indicators of career concern. It provides empirical support for the construction of extracurricular STEM programs based on methodical and fact-based ideas. Concluding a thorough assessment of participation rates, mentorship quality, and projects undertaken, the study shed light on the most effective strategies to support students from low-income households. Additionally, it provides a possible structure for program design and evaluation that includes important essentials like identity development measurements, skill development, and participation. STEM education will need to continue to get reasonable funding. When correctly organized, inclusive, and reinforced, mechatronics clubs can be a powerful accompaniment to conventional education. The programs will emphasize diverse groups, and the use of evidence-based practices has the potential to change the system and enlarge access and opportunity in challenging STEM professions.

Want to Learn More?



Baqer Aljabr serves as Assistant Dean in the School of STEM at Owens Community College, overseeing Engineering Technology, Skilled Trades, and Welding. He brings experience in teaching, curriculum development, and program coordination, and supports curriculum design, program assessment, faculty professional development, and initiatives in emerging technologies. His work advances experiential learning and strengthens pathways for students into engineering and advanced manufacturing careers. Additionally, he is a Ph.D. candidate in Mechanical Engineering at the University of Toledo, with a focus on advanced manufacturing, STEM education, and

workforce development.

2026 Challenges to Innovation
Artificial Intelligence and the Future of Environmental, Health, Safety, & Sustainability

Register Here

Friday March 27th, 2026
 University of Findlay
 Alumni Memorial Union

University of Findlay
 Department of Environmental, Safety & Occupational Health

2026 EHSS Innovations Conference Hosted by the University of Findlay

Join students, alumni, and industry professionals for a day of learning and networking focused on the future of environmental, health, safety, and sustainability, featuring sessions on artificial intelligence and its impact on the field. CEUs are available, and exhibitor and sponsorship opportunities are open.

Friday, March 27, 2026 | 8:00 a.m. – 4:00 p.m.
 University of Findlay | Alumni Memorial Union | Findlay

Learn more and register [here](#).

2026 Career Premiere Hosted by OhioMeansJobs Wood County

The 6th annual Career Premiere is a hands-on career exploration event connecting high school students with employers across the region. Employers are encouraged to make their displays interactive to maximize student engagement.

Wednesday, March 4, 2026 | 9:00 a.m. – 3:00 p.m.
 Wood County Fairgrounds | Bowling Green

Learn more and register [here](#).

2026 Wood County Career Premiere!
 Wood County Fairgrounds
 March 4, 2026, from 9am-3pm

Employers & Training Providers Register Here

or register by link: <https://bycell.co/ddojo>

OhioMeansJobs
 Wood County
 Award partner of the American Job Center network

REGIONAL GROWTH PARTNERSHIP 2026 ANNUAL MEETING

Presented by

LIVE from DOWNTOWN

Regional Growth Partnership Annual Meeting

The RGP Annual Meeting is a key opportunity to connect with leaders and partners across Northwest Ohio. The event will highlight major milestones from the past year and explore future opportunities shaping the region’s economic growth. Doors open at 1:00 p.m. with a networking reception to follow from 3:30 to 5:30 p.m.

Thursday, March 5, 2026 | 2:00 – 3:30 p.m. (Reception to follow)
 Glass City Center | Downtown Toledo

Learn more and register [here](#).

We're continuing our monthly Student Spotlight to celebrate interns, co-ops, and apprentices working with manufacturers and logistics companies across our partner schools. Real-world experience is where education and industry intersect, and each month we'll highlight a student's experience, what they learned, and their advice for peers.

If you'd like to learn about internship, co-op, and apprenticeship opportunities with students from Bowling Green State University, the University of Findlay, and Owens Community College, please reach out and we'll connect you. Together, we can create more pathways for students to build skills.



Madison Townsend
University of Findlay
Biochemistry Major, Gerontology and Biology Minor
The Andersons
Research and Development Intern



University of Findlay

During her recent internship at The Andersons, Madison Townsend stepped into the world of agricultural business and manufacturing, applying her scientific knowledge to real-world R&D projects in an industry she hadn't originally envisioned for herself. Working alongside a research and development team, she analyzed industrial samples, supported ongoing projects, and saw firsthand how data informs decisions that shape large-scale operations.

Though her long-term goal is a career in medicine, Madison found this experience to be both rewarding and eye-opening. She credits her coursework at the University of Findlay, particularly labs and projects that emphasized critical thinking, problem-solving, and collaboration, for helping her feel confident and prepared in a professional setting.

"Being part of a professional, fast-paced environment helped me develop critical skills like adaptability, attention to detail, and communication, all of which translate directly to a clinical setting," she says.

Her story is a strong reminder that manufacturing and its related industries offer far more than traditional production roles — it's a dynamic field with opportunities for researchers, scientists, engineers, and innovators from many disciplines. For Madison, this experience not only reinforced her career goals, but also expanded her understanding of how scientific problem-solving plays a vital role across industries.

She'll carry the insights and skills gained at The Andersons with her as she prepares for medical school, and into a future focused on thoughtful, team-based care.

Contact Us



Kassie Cooper
Director
kassiec@bgsu.edu



Jeri Steinbrook
Workforce Training
Coordinator
jeris@bgsu.edu



Danielle Sidebottom
Assistant to the
Executive Director
dsidebo@bgsu.edu