Apprenticeships for the Modern World
Our E3 Program Highlighted Real-World Instruction

Libby Culley, Marketing Outreach
Ohio State's Center for Design and Manufacturing Excellence

The demands of today's workforce are different - much different - than those of the 20th century. This is not a news flash or a catchy intro - bear with me. Education, training, and highly skilled talent are requirements being sought by industry today both home and abroad. Finding the niche fitting today's workforce model is increasingly difficult. Employers, especially those in manufacturing, consider themselves lucky to find and retain someone with just one of these attributes. A person boasting the trifecta is a manufacturing company's Shangri-La. The factors contributing to this workforce dilemma are many, some of which are the retirement wave among our boomers, the technical learning curve for modern-day manufacturing (high-tech machines and connectivity!), and a culture that is afflicted by addiction and political strife. Not to fear.

The landscape for employers in Ohio and beyond is also more robust than ever if you consider the level of technology, innovation, industry collaboration, and academic support currently available. The Center for Design and Manufacturing Excellence hears and sees the struggles within industry, and we find that manufacturers and small businesses simply need to learn about the abundance of services and assistance available to them as they backfill vacancies and cast a net for new hires. The Ohio State University's Center for Design and Manufacturing Excellence launched the nation's first educational program combining product design, manufacturing, commercialization, and business modeling. The model for our Experiential Entrepreneurship Education (E3) program is steeped in both real-world projects from industry and the brainchildren of students. In either case, product design, rapid prototyping, and light manufacturing are critical components in honing students' optimal workforce readiness. Companies participate through sponsored projects (capstones), paid projects, co-op opportunities with our students, incubating student-led start-ups, and sending their employees to our industry training programs.

The National Network of Business and Industry Associations, whose mission is to "bridge the skills by better connecting the worlds of learning and work" ([Connecting what American learns to how America works] (n.d.). Retrieved February 26, 2018, from http://nationalnetwork.org), published a report recently on the importance of apprenticeships in America. They highlighted our Experiential Entrepreneurship Education (E3) program as an example of how "college-level academics" translates into "real-world learning opportunities" by "ensuring that graduates leave the university with work-ready skills". The Ohio State University, CDME, and local manufacturing partners are committed to providing high-level education and real-world training to deliver the best talent to industry. It's our commitment. Read National Network's report here.

Jason Robinson
Senior Mechanical Design Engineer at CDME

Marc Purslow
Director of Materials & Welding at CDME

Jason Robinson is Senior Mechanical Design Engineer with industry experience in design and manufacturing of a variety of advanced products and systems.

Marc Purslow is an expert in the development and implementation of advanced manufacturing technologies. A graduate of the Ohio State University, he brings a wealth of experience to his role at CDME.
of technologies. Jason holds a Bachelor of Science in Mechanical Engineering from Wright State University. Prior to joining CDME as a Lead Engineer, Jason worked on mechanical design and manufacturing of load and pressure measurement devices, mobile radar systems, and Fischer-Tropsch reactors employing micro-channel technology. Jason's background has exposed him to a wide variety of design principles and manufacturing techniques, with a focus on simulation-based design for fluids, heat transfer, and structural mechanics.

MFG TM: John Brandt of MPI Group discovers surprises in IoT readiness among manufacturers

Kathryn Kelley, Director of Ohio Manufacturing Industry Manufacturing Tomorrow is a podcast series brought to you by the Ohio Manufacturing Institute at The Ohio State University. Featuring the perspectives of manufacturing leaders, they focus on the advanced manufacturing innovations, solutions and partnerships that exist in our region now and that will propel industry in the future.

Most Recent Podcast:

Their latest MFG TM podcast interview is with Sundar Veeraraghavan, PhD, who manages emerging products for UES Inc., a Dayton-area science and technology firm and an R&D 100 award winner. At UES, Sundar focuses on helping to mature and bring to market the cutting-edge technologies that his colleagues develop in materials science, surface engineering, power and propulsion, lasers and photonics as well as bio- and nano-materials. Sundar discusses the coating and materials characterization technologies that led to UES becoming an R&D 100 award winner and workforce practices in recruiting specific technical specialties.

Listen to the podcast at https://omi.osu.edu/podcast

Last Month’s Podcast:

John Brandt, CEO and founder of The MPI Group, is an internationally recognized expert on manufacturing and technology with more than two-decades of experience devoted to studying leadership in effective, purpose-driven organizations as well as how companies can adapt themselves to today’s new markets, corporate

Ohio Seeking Companies to Hire Export Interns - March 1 deadline!

Are you a business interested in selling your products or services internationally? The Ohio Development Services Agency is seeking companies who are currently exporting or interested in pursuing export opportunities.

The Ohio Export Internship Program provides a unique opportunity to businesses interested in exporting by matching them with highly-motivated college students who have taken export-focused coursework. This year, 42 students from 12 different Ohio universities have been selected to participate in the program.

The Ohio Development Services Agency offers participating small to medium-sized businesses a 50 percent reimbursement for the wages of the intern.

In the six years of the program there have been 190 student-company matches, resulting in more than $31 million in expected global sales and 35 full-time job offers to students.

The deadline for companies to apply is March 1, 2018. The summer internship runs from May 14 through August 10, 2018. Ohio companies can apply at https://development.ohio.gov/bs/bs_oxip.htm. The program is a partnership between the Ohio Development Services Agency, The Ohio State
structures, and customer demands. In this interview, he outlines overarching trends in manufacturing. MPI Group’s annual Internet of Things industry survey and offers advice to small and medium firms.

Click here to listen to last month’s podcast.

Economist Ned Hill on Ohio Manufacturing

Dr. Edward “Ned” Hill, who teaches economic development policy, public policy and public finance in both the Glenn College and the City and Regional Planning section in The Ohio State University’s College of Engineering’s Knowlton School of Architecture, was featured in Capitol Letter by Cleveland.com.

In the brief piece, Hill said this about Ohio manufacturing: “Ohio’s a manufacturing state. It’s 17 percent of employment, 19 or 20 percent of GDP… Our productivity rates are growing like crazy and I think we do it very well. But manufacturing like any industry, I don’t want straight out subsidies going into it. … So (it’s important for the state to provide a) trained labor force, competitive energy markets, technical assistance to small and mid-sized firms.”

For the full article click here.


CDME Events

CDME Open House
Friday, March 16  11:00 AM - 1:00 PM
Get a behind-the-scenes look into CDME at our first of four open houses of 2018.
Register Here

Other Upcoming Events

Nationwide Children 2018 Technology Showcase
Wednesday, March 7  1:00 - 5:00 PM
Rev1 Ventures
1275 Kinnear Road
Columbus, Ohio 43212
Register Here

IDEAtion Workshop
Wednesday, March 7  5:30 - 7:00 PM
Innovation Center
340 West State Street
Athens, Ohio 45701
Register Here

Protect Your Business Idea: Patent, Trademark, University, Youngstown State University, and Cleveland State University. To learn more about the Ohio Export Internship Program, click here.


New 33 Innovation Park

The new 33 Innovation Park is the premiere industrial park northwest of Columbus, Ohio in the City of Marysville. As a function of its prime location, the park will be a center for research and development, innovation, and advanced manufacturing. The 33 Innovation Park is a master planned industrial development with flexible building layouts and various incentives available from the City of Marysville and Union County. The proposed NW 33 Fiber Collaborative and Ohio Smart Mobility Initiative will also provide a competitive advantage for the park.

For more information click here.

SBA Emerging Leaders Initiative

Emerging Leaders Initiative provides free entrepreneurship education and training for executives of small, poised-for-growth companies that are potential job creators. This intensive executive entrepreneurship series includes nearly 100 hours of classroom time. Over the course of seven months, participants are given the opportunity to work with experienced mentors, attend specialized workshops and develop connections with their peers, city leaders, and the financial community. This training is for established business owners and is not for start-ups or people who are thinking about starting a business. The Emerging Leaders Initiative advanced training series is open to small business owners and executives that:

- Have annual revenues of at least $400,000
- Have been in business for at least 3 years
- Have at least one employee, other than self
or License
Wednesday, March 14  10:00 AM - 12:00 PM
Dublin Entrepreneurial Center
565 Metro Pl S
Dublin, Ohio 43017
Register Here

Ohio Entrepreneur Expo 2018
April 27-29
Greater Columbus Convention Center
400 North High Street
Columbus, Ohio 43215
Price Varies
Register Here

To learn more about the Emerging Leaders Initiative click here.

U.S. Small Business Administration. SBA Emerging Leaders Initiative.
Retrieved from https://www.sba.gov/about-sba/sba-initiatives/sba-emerging-leaders-initiative?
utm_medium=email&utm_source=govdelivery

The Ohio State University's Center for Design and Manufacturing Excellence is now serving these counties in Ohio.

How can we help you?
Contact us today.
cdme.osu.edu | 614-292-2888

The Ohio Manufacturing Extension Partnership (MEP) program is funded in part by the U. S. Department of Commerce, National Institute for Standards and Technology, the Ohio Development Services Agency and local partners including the Center for Design and Manufacturing Excellence. Ohio MEP is driving productivity, innovation and global competitiveness for Ohio manufacturers with a focus on small and medium sized enterprises (SME).

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