BUILDING 21st CENTURY MANUFACTURING TALENT

Attracting more young people to manufacturing careers

Deploying pathways from K-12 through community colleges to university four-year degree programs, with more on and off ramps to employment

Ohio Means Internships & Co-ops 2.5 Program
An Education & Workforce Development Initiative for LIFT ... Lightweight Innovations for Tomorrow
July 1, 2015 – December 16, 2016

THE PROBLEM

Manufacturing is the largest sector of Ohio's economy at 18% GDP, producing more than $52 billion in products sent to 216 countries. Most manufacturing firms in Ohio are small businesses. Approximately 97% of Ohio manufacturing firms employ less than 500 workers, including almost 50% of firms with 1-4 employees. At the same time, demand for workers in manufacturing is at record levels. Manufacturing employers posted over 275,000 online ads for workers in Ohio during 2014, and 2015 is set to surpass this record. The need for skilled workers in advanced and lightweight manufacturing is expected to grow exponentially.

The skills necessary for many workers in the field take years to develop and, with rapidly shifting technologies, many workers' skills will be outdated by the time they are mastered in the classroom. How can Ohio fill the pipeline of trained workers now to ensure that the manufacturing sector remains strong?

THE SOLUTION

In response to the need for more on-the-job and work-based learning, the Ohio Department of Higher Education funded the LIFT Ohio Means Internships & Co-ops 2.5 Program (LIFT OMIC). OMIC is a partnership between The Ohio State University (OSU) and its academic and industry partners to build a co-located internship program that trains students for in-demand lightweight manufacturing technologies. The goal is to bolster a workforce proficient in the application of advanced lightweight metal alloys, manufacturing technologies, and design methods important to advanced manufacturing. LIFT and OSU have assembled a strong team to develop this novel educational approach to manufacturing education involving real-world industry projects with close involvement by academic faculty and students.

Initially, the program's goal is to engage 80 interns and conduct 30 co-located internships.

PARTNERS

Lead
The Ohio State University
Ohio Department of Higher Education

Academic partners
The Ohio State University, Columbus State Community College, Tolles Career and Technical Center, C-TEC Career & Technology Education Centers of Licking County, Tri-Rivers Career Center, Marion Technical College, Metro High School, Columbus School for Girls

Industry and technology partners
Honda and Whirlpool, JobsOhio, Ohio Manufacturers' Association, and Edison Welding Institute

ALIGNMENT TO LIFT WORKFORCE & EDUCATION GOALS

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EXPECTED OUTCOMES

Teams of co-located interns may provide valuable perspectives to industry through cross-institutional training. The LIFT OMIC co-located internship program intends to address a central concern of employers – closing the skills gap between the classroom and the workplace.
PROJECT DESCRIPTION

• Focused on in-demand manufacturing career pathways
• Solve industry-identified problems through individual or team projects
• 80 total internships
• 30 co-located internships
• Students will:

  Undergo high-level training, utilizing resources at both sites with industry and academic mentors. At a minimum, the student or student teams, faculty mentor, and company representative must meet at the beginning and end of the semester to work on project goals, timelines, resources and deliverables.

  Have access to school facilities and equipment to use on industry-defined and driven projects.

  Work individually or in teams (single or multi-institution including students from Ohio Technical Centers, community colleges, and research universities).

  Receive scholarships toward tuition and fees as well as an hourly salary.

  May receive assigned online educational resources by the company on industry-specific skills, such as LEAN, Six Sigma Black Belt curricula, and soft skills, such as communication, problem-solving, and project management.

  Receive academic credit or a transcript notation for their effort over the academic term.

BENEFITS TO PARTICIPANTS

Students, faculty, and industry will come together for the LIFT OMIC internship and co-located internship program. The program benefits all involved to create well-trained, ready, cohorts of highly-skilled workers for Ohio manufacturing firms.

Students will:

• Gain hands-on training working in real-world industry projects
• Earn competitive hourly wages from participating companies
• Open opportunities to future employment
• Earn a $1,000 scholarship during initial project semester
• Receive academic credit or transcript notation at completion

Faculty will:

• Work closely with industry representatives to help students gain experiential learning
• Collaborate with cross-institutional teams on sustainable best practices in advanced manufacturing, furthering curriculum development

Participating companies will:

• Directly access talented students
• Work with faculty mentors that offer project expertise
• Choose training modules for students that ensure the future workforce has industry-specific skills such as Lean, Six Sigma, and others

Details on the LIFT OMIC program are at http://omi.osu.edu/omic. Industry members or students may contact Kathryn Kelley at omic@osu.edu or kelley.81@osu.edu.

For more information please see lift.technology or contact LIFT Education & Workforce Director Emily DeRocco at ederocco@lift.technology.