

Trade Adjustment Assistance Community College and Career Training (TAACCT) Round 4

State Of Ohio Impact Report

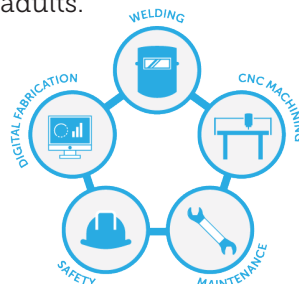
Prepared by Ohio TechNet
April 27, 2017



Lorain County Community College leads Ohio TechNet (OTN), a consortium of 11 Ohio community colleges, 290+ employers, workforce partners from 71 counties and the State of Ohio. This statewide initiative addresses the skills gap by developing targeted manufacturing training programs for transitioning adults.



\$15 MILLION + \$1.7 MILLION
INVESTMENT LEVERAGED
RESOURCES



Ohio TechNet was developed as a result of a sizable DOL investment. Innovative, industry-aligned programs in five major advanced manufacturing industries are developed and enhanced to serve a diverse population of adults, including displaced workers eligible for training under the Trade Adjustment Assistance (TAA) for Workers program and veterans.

ADULTS ARE LEARNING INDUSTRY-RECOGNIZED SKILLS FOR IN-DEMAND OCCUPATIONS that provide family-supporting wages.

1102

INDIVIDUALS ENROLLED
IN OTN PROGRAMS

679

CREDENTIALS EARNED BY
STUDENTS IN
OTN PROGRAMS

\$1.6M

FEDERAL INVESTMENT IN
STATE-OF-THE-ART
MANUFACTURING EQUIPMENT

290+

EMPLOYER
PARTNERS

as of September 30, 2016.

101 PROGRAMS OF STUDY

many with stackable credentials, have been developed or redesigned to help adults earn skills that lead to careers with family-supporting wages.

Program innovations include:

INDUSTRY ALIGNED CURRICULUM

developed with engagement of more than 290+ employer partners.

ACCELERATED LEARNING STRATEGIES

including credit for prior learning, competency-based models, and innovative models to increase access to credentials for underprepared learners.

HANDS-ON EXPERIENCE

including on-the-job training, internships, and registered apprenticeships.

KEY COLLABORATIONS

Partnering nationally and statewide to address Ohio's manufacturing skills gap.



Governor's Office of
Workforce Transformation



Ohio Department of
Job and Family Services



ohiotechnet.org

This workforce product was funded by a grant awarded by the U.S. Department of Labor's Employment and Training Administration. The product was created by the grantee and does not necessarily reflect the official position of the U.S. Department of Labor. The U.S. Department of Labor makes no guarantees, warranties, or assurances of any kind, express or implied, with respect to such information, including any information on linked sites and including, but not limited to, accuracy of the information or its completeness, timeliness, usefulness, adequacy, continued availability, or ownership.

"As Chancellor for the Ohio Department of Higher Education, I've had the opportunity to personally witness the impact of TAACCCT funding statewide," said Chancellor John Carey. "Community colleges are being utilized to accelerate time to degree or certification and/or to transfer to a four-year university at a reduced cost. Ohio TechNet is Ohio's consortium of 11 community colleges focused on meeting the training needs of the advanced manufacturing industry. Ohio's other TAACCCT grantees have created accelerated training for in-demand industries throughout the state. TAACCCT funding of state-of-the-art training equipment and innovations in accelerated curriculum models is providing a fast track to family-supporting wages for Ohio's transitioning adults, including veterans and those who are TAA eligible."

John Carey

Chancellor
Ohio Department of Higher Education

The capacity provided by our nation's investment in community colleges, through the DOLETA TAACCCT program, has served as a transformative opportunity to provide adults who are in transition with accelerated training that prepares them for in-demand careers. Lorain County Community College is proud to lead Ohio TechNet, a state consortium of eleven Ohio community colleges focused on Ohio's vital advanced manufacturing sector. TAACCCT has played a pivotal role in Ohio to develop and enhance programs that meet the unique needs of our adult learners for both academic and career success. Those lessons now inform ongoing collaboration among Ohio's institutions of higher learning.

Each of our partner institutions have remarkable stories to share – of returning veterans and dislocated workers with new careers and new hope for the future, of new investments in state of the art equipment that supports innovative partnerships with local employers, of the expansion of registered apprenticeship and other earn and learn programs, and of accelerated and competency based programs that offer skills training tied to industry recognized credentials and credit for prior learning.

One of the most impactful aspects of Ohio TechNet has been the capacity it provides for collaboration and shared learning. In addition to working with our partner schools, Ohio TechNet welcomes Ohio's other TAACCCT grantees to share best practices and participate in Ohio TechNet programs. This capacity improves the efficiency of the system as a whole to be responsive to the needs of our industry partners and adult learners. Because of Ohio TechNet, Ohio community colleges are working in collaboration with leading manufacturing companies both locally and statewide to ensure that Ohio has the talent needed to support technology innovation and business growth. TAACCCT has made it possible for each of our partner colleges to customize how programs are delivered to meet the unique needs of adults in their community. Those lessons directly inform ongoing state workforce and higher education policy as well as community-level innovation.

Dr. Marcia Ballinger

President
Lorain County Community College



*Lorain County
Community College*

OhioTechNet

OhioHigherEd
Department of Higher Education



Featured Statewide Impact Projects

Credit for Prior Learning

With its focus on acceleration, prior learning assessment, and employer involvement, Ohio TechNet is fully integrated with our governor's goal of seamless services to job-seekers and employers.

Ohio and Ohio TechNet colleges are at the forefront of efforts to award credit for prior learning. The PLA with a Purpose state initiative is establishing a system of uniform criteria and process steps for review and granting of credit. Ohio TechNet will build on these efforts by developing a crosswalk to map industry credentials to courses in welding, machining, and industrial maintenance to better assess student skills/needs. Ohio TechNet is working with the Ohio Department of Higher Education to research and possibly fund an online PLA predictor tool to expand PLA awards statewide. This supports research findings that students with PLA credit had higher graduation rates, better persistence and lower time to degree compared to students without PLA credit.

Ohio has a nationally recognized and respected credit transfer system that allows for the transfer of credit between all Ohio secondary and postsecondary public institutions and includes career-technical credit transfer guides, military credit transfer, prior learning assessment, and apprenticeship articulation.

Since receiving TAACCCT funding on October 1, 2014, Ohio TechNet participants have received 389 PLA credits.

"Prior Learning Assessment (PLA) is a proven strategy for opening the doors of our universities, colleges and adult career-technical centers to a much larger number of students, including many adults who may have begun a postsecondary program years ago, but left without earning a degree or other credential. Ohio TechNet supported creation of a commonly adopted and applied rubric to increase the academic integrity of PLA programs based on a uniform model, written criteria and a transparent process with a strong focus on well-defined learning objectives. In addition to these efforts, ODHE and Ohio TechNet are exploring better web-based PLA resources, including a clearinghouse with campus-by-campus links to PLA data and other information that can be used by other institutions to further develop and enhance their PLA offerings," **said Brett Visger, Associate Vice Chancellor, Institutional Collaboration & Completion, Ohio Department of Higher Education.**

Employer Engagement

Ohio TechNet launched with the support of 47 employers. As of December 31, 2016, more than 290 employers have engaged with the Ohio TechNet initiative. To further expand our impact with employers, Ohio TechNet has partnered with the Ohio Manufacturers' Association (OMA) to support Manufacturing Leaders Solving Workforce Issues Together, OMA's statewide initiative to develop industry sector partnerships, a proven workforce development strategy that put employers in the driver's seat. Manufacturers within a regional labor market work together to influence alignment around common solutions with education and training, economic and workforce development, and community organizations. Ohio TechNet has assisted with planning the regional convenings which will take place at about six locations throughout the state. The culmination event will be a statewide employer convening which is scheduled for November 2017.

"With the support of Ohio TechNet, the Mahoning Valley Manufacturers Coalition, the Ohio Manufacturing Institute and state leaders, the Ohio Manufacturers' Association (OMA) formed the OMA Workforce Team committed to helping manufacturers launch regional industry-led sector partnerships throughout Ohio with an initial focus on creating strategies to assist employers with skills gap issues. It is because of strong partners like Ohio TechNet that OMA felt confident in establishing workforce as an organizational statewide priority. The Ohio TechNet consortium of 11 community college partners provides access to accelerated manufacturing training for adults in 71 of Ohio's 88 counties. When combined with the work of other TAACCCT grantees, nearly every county in the state is impacted by enhanced manufacturing training programs. OMA embraces the opportunity to connect employers to the innovative training supported by TAACCCT funding in Ohio." <http://bit.ly/2oRzQmZ>
Eric Burkland, President, Ohio Manufacturers' Association

Ohio TechNet Employer Testimonials

"There is good momentum in connecting Ohio manufacturers with Ohio's TAACCCT initiatives. I look forward to continuing to support the effort!"

Scot McLemore, Talent Acquisition and Deployment HR and Admin Division, Honda North America, Inc.

"On behalf of Yaskawa, I wanted thank all of you for having us host the Miami Valley manufacturers' event! We will all surely benefit from the collaborations and partnerships that will come out of our efforts. Looking forward to next steps."

Bob Graff, Senior Sales Manager, Education, YASKAWA AMERICA, INC.

"I'd recommend that our Welding Advisory Committee meet more frequently to focus solely on Curriculum Development" As a result, with the support of the entire Welding Advisory Committee, an additional meeting has been scheduled in May, 2017 to focus on Curriculum to ensure development aligns with employer need.

George Hlifka, Welding Engineer

"CNC operators are in high demand. We welcomed entering this partnership to set up the kind of program that could help fill that need. Any academic institution that takes the time to work with employers to find out what they need, that's a relationship that is worthwhile!"

Dave White, Manager of HR, PLIDCO

"We certainly understand the importance of everything that Owens does for the betterment of not only the kids, but also the manufacturing industry. Continued success!"

Carol Coe, President, Jerl Machine, Inc.

"Awesome for the industry! The education they get is far improved from the industry standard. Especially in print reading and weld symbols."

Mike Fisher, Owner, Fisher Metal Fabricating

"A well-rounded education elevates the employee to a higher status. Because of the hands-on experience, the employee is well prepared for the field."

Neapco

"It will provide us with another resource for obtaining individuals with the skill set we are needing and will also help position our company with the ability to provide quality product to our worldwide customer base."

Sam Jenkins, Vice President of Operations at Sweet Manufacturing

"Zane State College is important to our area because they enable companies like ourselves to draw from a trained and competent local work pool rather than hiring from outside the state. We also recognize that employer engagement is critical in the success of education and training programs in producing qualified workers," states JP Marshall, president of Patriot Stainless, Inc. "With the Department of Labor's support, these programs will be able to implement innovations to training programs that will quickly produce the types of workers we all desperately need."

JP Marshall, president of Patriot Stainless, Inc.

OhioTechNet

OhioHigherEd
Department of Higher EducationCincinnati State
TECHNICAL AND COMMUNITY COLLEGECOLUMBUS STATE
COMMUNITY COLLEGECuyahoga
Community
CollegeEASTERN GATEWAY
COMMUNITY COLLEGELorain County
Community CollegeLakeland
COMMUNITY COLLEGEOWENS
COMMUNITY COLLEGEJAMES A.
RHODES
STATE COLLEGESINCLAIR
COMMUNITY COLLEGESTARK STATE
COLLEGEZANE STATE COLLEGE
ZSCOhio's Other TAACCCT
Round 4 GranteesCLARK STATE
COMMUNITY COLLEGENorthwest State
Community College

Ohio TAACCCT Grantee Testimonials

Ohio TechNet Grant funding was a critical piece in bringing Stark State College's new manufacturing lab to fruition, said Dr. Para M. Jones, the College's president.

"Thanks to the US Department of Labor TAACCCT funding received under the Ohio TechNet Grant, Stark State was able to leverage follow-up funding from the Timken Foundation to equip our new world-class WR Timken Advanced Manufacturing Lab," Jones said. The lab boosts training capability for several of Stark State's manufacturing partnerships, including one with Ariel Corporation, the world's largest manufacturer of separable reciprocating gas compressors. The lab also is used by students in apprenticeship programs for Kyocera SGS Tool, as well as the corporate training program for Timken Research prototype technicians.

The new machinery includes:

- Four HAAS CNC lathes
- Four HAAS CNC mills
- HAAS CNC mill (5 axis capability)
- Six numerical control / manual lathes
- Five numerical control / manual mills
- Surface grinder
- Mitutoyo Coordinate Measuring Machine
- Complete simulation lab with 14 HAAS simulation trainers
- Dimensional metrology lab
- Variety of layout and tooling

The Lab also includes an additive manufacturing cell with:

- Stratasys Fortus 450 MC 3D printer
- Stratasys Objet 500 Connex3 3D printer

**Dr. Para Jones, President
Stark State College**

Four years ago, our rural students struggled to achieve a standardized education in industrial technologies. Economic development, WIBS, employers and the college were working independently to address the skills gap in our area. The TAACCCT grant has become a change agent in Northwest Ohio. These federal funds have allowed access to life-changing training in our communities, accelerated completion for workforce development, and increased collaboration not only regionally, but with colleges and universities across the state.

Prior to TAACCCT, community colleges and universities seldom collaborated without pressure at a state level to do so. Now, grantees in Ohio routinely and freely support each other by sharing information about best practices and sector strategies. For example, we are strategically responding to the need for a prior learning assessment rubric that will acculturate prior learning in all of Ohio's higher learning institutions. This initiative was started by the Ohio TechNet grant, and other grantees have rallied to assist the efforts. With successful collaborations such as these, we are confident that the partnership that TAACCCT has cultivated will be sustained in the years to come.

**Sarah Stubblefield, iSTAR Project Manager
Northwest State Community College**

The advanced manufacturing programs at Clark State developed under the TAACCCT program address the needs of the local manufacturing companies, especially those who are not positioned to provide specific training internally. Each segment of the advanced manufacturing programs can enhance an individual's skill set for themselves as well as for the company they work for or the company they are seeking employment with. These programs benefit manufacturers in our community. Sam Jenkins, Vice President of Operations at Sweet Manufacturing noted, *"It will provide us with another resource for obtaining individuals with the skill set we are needing and will also help position our company with the ability to provide quality product to our worldwide customer base."*

**Mary Benedict, Grant Project Manager
Clark State Community College**

Consortium grants provide beneficial strategic organization and coordination of resources to extend collaborations. The Ohio TechNet grant aligns with Ohio Department of Higher Education secondary and post-secondary initiatives which include a completion agenda with a clear pathway towards stackable, latticed credentials, national certifications, and collaborations with 4-year universities. Employer engagement has been enhanced via the Ohio TechNet grant. In addition to working closely with Lincoln Electric and others in the development of welding curriculum and placement of students, Cuyahoga Community College (Tri-C) recently hosted an employer

meeting that highlighted a collaboration with the Ohio Manufacturers' Association. We intend to build upon existing partnerships as well as develop new partnerships, working more efficiently to prevent the fatigue for employers and civic stakeholders of stopping and restarting multiple projects with no concrete action plan in place. Employers were appreciative to be able to come to a "one-stop" alliance for information, strategies, and best practices. We are proud to work together to connect the dots for our regions.

Phyllis Kolodny, Project Manager
Cuyahoga Community College

The TAACCCT grant has significantly impacted Owens Community College in a very positive way. New and current students have benefited from more organized and modern prior learning assessments, improvements and additions to key lab equipment that is very similar to what is found in industry, and a designated retention advisor who has assisted students become more likely to finish a degree or certificate. In addition, students are learning job search skills and are being exposed to various positions related to welding and manufacturing. This grant has also allowed the college to take steps towards getting an outside or third party validation from the American Welding Society (AWS). This affiliation with AWS will lead to additional training opportunities for the college and allow students to obtain a certification that would be recognized not only statewide, but nationally.

Glenn Rettig, Dean
School of Science, Technology, Engineering and Mathematics

Denise S. Smith, Associate VP
Academic Affairs & Academic Services
Owens Community College

As a TAACCCT grantee and partner of Ohio TechNet, Zane State College and the welding and industrial systems students have been reaping the benefits of being a consortium member. By hiring a new faculty member and through the purchase of new industrial maintenance training equipment, welding booths and a robot, students now have access to state-of-the-art equipment and trainers. At the inception of the TAACCCT grant, the Industrial Systems Engineering program had only three students enrolled. Recruiting visits to local area high schools revealed that manufacturing positions were not being considered by any of the students. After explaining the programs and bringing students to campus to tour the labs, followed by a tour of a manufacturing facility, today we have 22 students enrolled, and we anticipate a final enrollment of 25 to 30 by fall semester.

Our campus, located in the heart of the industrial park in Cambridge, is at the epicenter of a diverse group of industries such as Detroit Diesel, FedEx, Colgate, and Rigid Tool. Supplying these companies with a continued pipeline of well-trained workers and offering credit and non-credit training through our workforce development center have become the primary focus for our institution. We have yet to have a student reach graduation who is not already employed in one of our grant-affected programs. Manufacturing is the backbone of Ohio's economy, and with the help of the Department of Labor and the Ohio TechNet consortium, Zane State College is now able to train and supply a highly skilled workforce.

"Zane State College is important to our area because they enable companies like ourselves to draw from a trained and competent local work pool rather than hiring from outside the state. We also recognize that employer engagement is critical in the success of education and training programs in producing qualified workers," states JP Marshall, president of Patriot Stainless, Inc. "With the Department of Labor's support, these programs will be able to implement innovations to training programs that will quickly produce the types of workers we all desperately need."

Becky Anderson, Project Manager
Zane State College

Lakeland Community College, our students, and area employers have benefited immensely as a result of the US Department of Labor TAACCCT Grant. The students experience has been enhanced as a result of: additional equipment, availability of more classes especially during the day and on weekends, as well as modified curriculum aligned with employer need to support a pathway to success in a welding career. Early evidence comes from: a 77% increase in enrollment between the 2014-15 Academic Year and the 2016-17 Academic Year and our student's success in the 2016 Skills USA competition which is referenced in a December, 2016 article featuring Lakeland in the American Welding Society Journal: <http://bit.ly/2ku58vn>. More students are being introduced to the field of welding as a result of our recruitment including a video developed by Lakeland in collaboration with BESSEY Tool: Welding Careers - *Behind the Mask* - <http://bit.ly/2oM0L0N> and *Tips for Welding Success - Advice for Students* - <http://bit.ly/2oJxoeX>

The growth and success of the Welding Program made in large part because of support from the TAACCCT Grant has resulted in the planned expansion of Lakeland's Welding Program through the addition of a Welding Lab, supported by the Ohio Department of Higher Education, featuring 16 additional welding booths and a robotic welder. Of considerable value is the curriculum development which is being created to align with area workforce need. Welding Advisory Committee members are vocal regarding the skills sets that applicants need in order to be successful on the job. **Brian Cook, Lakeland's Interim Dean for Applied Studies said,** "The grant has been a great fit as it supports and aligns with Lakeland's goals of supporting student success, completion and aligning academic programs with area workforce needs which prepares students to be job ready upon completion."

**Linn Gahr, Project Manager
Lakeland Community College**

The TAACCCT grants have significantly impacted Eastern Gateway Community College (EGCC) and the surrounding communities will benefit from this investment. Through TAACCCT funding, Eastern Gateway was able to develop a machining lab and a welding lab equipped with state-of-the-art equipment. EGCC has been working with the Mahoning Valley Manufactures Coalition to develop specialized programs for business for the non-credit training of their employees as well as being able to offer new students different pathways of specialization in manufacturing. EGCC is working with the local Ohio Mean Jobs office to develop several short term welding programs that will enable students to obtain the education and training they need to gain employment, in a reduced amount of time. EGCC is still running its accredited Associate Degree program and looks to bolster the numbers of participants as time goes on.

EGCC is also working on articulation agreements between the local career and technical centers as well as Youngstown State University (YSU), providing more options for students and businesses. The development of the articulations between the career and tech centers will allow students to expedite their training. The coordination between YSU and EGCC will allow the students to have options beyond just the two year degree.

All of the programs listed above have enabled EGCC to reach a diverse population of students from the Youngstown area and surrounding communities. As we continue to grow our programs, the ability for students to get comprehensive training as well as specialized training will allow them to succeed in manufacturing.

**Ryan Pasco, Project Manager
Eastern Gateway Community College**

Sinclair's participation in TAACCCT has impacted state and regional educational policies.

In March 2017, Sinclair received institutional approval to offer competency-based education programs, an endeavor sought and achieved, in part, because of TAACCCT participation. TAACCCT engagement at Sinclair has enabled our college to become an early adopter and lead the way in defining current and future educational policies surrounding competency-based education (CBE) for the state and region. TAACCCT participation also allowed Sinclair to produce a video supporting MFG Day and manufacturer recruitment. The video is being viewed online and is used to recruit more MFG Day participation in the region.

TAACCCT has enabled better collaboration with OMJ Montgomery County. Sinclair hosted two industry input sessions to align the National Emergency Grant to local employer needs. Our collaboration with OMJ led to the enrollment of dislocated workers who need training prior to re-employment in the manufacturing sector. This "Best Practice" is beginning to yield results. Also resulting from the collaborative effort between OMJ, Sinclair Workforce, and Sinclair Academics, a new ATS degree was created to support the goals of TAA-funded students interested in pursuing a combination of non-credit Workforce Development courses and traditional academic ones.

Also noteworthy, Sinclair now has implemented a process to automatically award academic credit for non-credit, Workforce Development students. To date, approximately 30 Workforce Development students in the SkillsTrac Industrial Maintenance program have been awarded up to 27 academic credits each, totaling more than 130 articulated credit hours program wide.

Our new accelerated programs for advanced manufacturing enable students to enter manufacturing careers much faster than traditional, seat-based programs allow.

In summary, TAACCCT programs are enabling Sinclair to offer more flexible pathways to certificates and degrees for high-demand, high-skilled manufacturing careers in the Dayton Region. <http://bit.ly/2q7zKJL>

**Jim Hill, Ohio TechNet Project Manager
Sinclair Community College**

On behalf of Cincinnati State, we would like to take this time to express our gratitude and appreciation of the Ohio TechNet Consortium program and what it has brought to the College and the Southwestern Ohio region. With Ohio TechNet's support and funding, Cincinnati State was able to enhance our training and certificate offerings in Welding. The grant purchased new equipment and resources for our renovated welding lab on our Clifton Campus. This helped build upon a DOL TAACCCT grant the College received previously. The grant allowed us to build capacity going from 10 welding bays to 22 helping us serve more students in a more timely manner. It provided an infrastructure for us to offer welding in different forms to meet the needs of traditional and non-traditional students. The spacious and well equipped facility offers welding in the traditional semester format, but also offers accelerated courses to train workers in MIG welding in just 15 weeks. The student gets Intro to Welding, Blueprint Reading, and MIG Welding (3 courses) all in one semester. This helps the student be "job ready" in an accelerated time frame. Those courses are stackable and will allow the student to continue on a pathway if they wish to a Welding one year certificate or an Associate Degree.

The funding has been a great success and has helped us bring welding to the Cincinnati urban core. Now residents in Cincinnati and the Southwest Region of Ohio can get the training and courses that can lead to a career that is high demand throughout the country. The grant has also been a great asset to our Manufacturing programs and will support the launch of a CAD certificate.

Cincinnati State like other schools in the Ohio TechNet consortium has joined The Manufacturing Institute. The collaboration of the various schools has been very helpful in establishing our curriculum and building our facilities. Sharing best practices helped us build a facility and program that was able to "hit the ground running" the day it opened. All in all, Ohio TechNet TAACCCT grant has given Cincinnati State the opportunity to deliver quality, hands-on, technical training and course work in Welding and related career pathways.

**Douglas A. Bowling, Dean
Cincinnati State Technical and Community College**

The U.S. Department of Labor's Trade Adjustment Assistance Community College and Career Training (TAACCCT) grant program, specifically the Ohio TechNet Consortium project, has been a valuable asset to Columbus State Community College in the expansion of our manufacturing-based academic offerings. Columbus State has been able to bridge the gaps from non-credit certification training programs to credit bearing academic pathways, providing in-demand talent to the regional workforce.

The impact of this work includes enhancements in the industrial maintenance and welding programs. The alignment of Columbus State's Integrated Systems Technology lab to the Manufacturing Skill Standards Council (MSSC) standards has added credibility to the robust, hands-on training opportunities for participants to enter the workforce or improve their upward mobility. The equipment contributions made possible by the Ohio TechNet Consortium project, has allowed Columbus State to expand a training method that can assess a student's ability versus a company's welding procedure in real-time. This ensures that the technical skills that students learn while pursuing their education align to industry standards.

The Ohio TechNet Consortium has served as a catalyst for manufacturing education and training growth at Columbus State. Additionally, the development of the statewide consortium has created a foundation for future collaborative endeavors and expansion of the current success.

Angelo J. Frole, Dean
Division of Business, Engineering and Technology
Columbus State Community College

The participation of Rhodes State College in the TAACCCT Round 4 grant has allowed the college to support the workforce needs in the region in multiple ways. Three key areas would be 1) Expansion of the West Central Ohio Manufacturing Consortium (WCOMC) Manufacturing Pathway program, 2) embedding of Industry Recognized Credentials in non-credit and Credit coursework, and 3) the growth and expansion of the DOL Registered Apprenticeship program.

In partnership with the WCOMC and its membership industry partners, the program has been improved by embedding several credentials valued by local

manufacturers. This program is designed to provide training that enables new career opportunities in Advanced Manufacturing for unemployed and underemployed participants including incarcerated adults. Currently, in addition to the WCOMC Manufacturing Pathway Certificate, students earn a certificate in Integrated Systems, using a trainer purchased with MS-AMC TAACCCT Round 2 funding, demonstrating alignment and continuity of the TAACCCT funding awarded to Rhodes State and their commitment to the workforce needs of the industries in the region. Students have the opportunity to gain college credit via the Prior Learning Assessment process.

TAACCCT funding has allowed Rhodes State to promote the award of industry recognized credentials to participants by embedding the credentials in both credit and non-credit coursework. Instructors have received professional development via grant funding to prepare them to deliver the content required to allow students to earn credentials in Mitsubishi Automation systems, Fanuc Robotics, NIMS Industrial Maintenance and Hazard Analysis Critical Control Point (HAACP), a Food Manufacturing credential.

The apprenticeship program, with funding from the TAACCCT round 2 Grant, started in 2012 with 39 apprentices. There has been steady growth with 158 apprentices in Fall 2016. TAACCCT funding has supported the purchase of training equipment that is an integral part of all of the Apprenticeship coursework. The equipment and supplies have greatly improved the curriculum Rhodes is able to provide. All apprentices earn Rhodes State College credit for their Related Instruction in the following areas: Electrical, Machine Repair, Millwrights, Multi-skilled, Powerhouse, Plumber/Pipefitter, Tool and Die, Toolmaker and Quality. Rhodes State College was recently designated as the first community college in the State of Ohio to be recognized by the Ohio State Apprenticeship Council as a DOL Apprenticeship Sponsor. Rhodes State is leading the expansion of Registered Apprenticeships for Ohio TechNet.

Margo Meyer, Director
Advanced Manufacturing & Initiatives
Rhodes State College

Ohio TechNet investments have showcased Lorain County Community College's (LCCC) leadership role in developing innovative programs to assist transitioning adults. When Ohio's state leadership team was exploring strategies to better serve the needs of displaced workers, LCCC shared its Retooling Adults for Manufacturing Programs (RAMP) model which was under development and supported by Ohio TechNet funding.

RAMP addresses the unique needs of adult learners, preparing them to compete in an advanced manufacturing environment, while addressing industry demand for a skilled workforce, by combining accelerated, credit bearing skills training with a paid work experience. LCCC has developed 11 different on-RAMPS. Three launched in spring 2017: Automation Maintenance, Industrial Electrical Maintenance and Micro-Electromechanical Systems.

Ohio TechNet supported the launch of Training & Recruitment Accelerated Innovation Network, or TRAIN Ohio. TRAIN Ohio blends school and work into a 21st century "earn and learn" program where companies and educators integrate activities in both space and time. This earn and learn model piloted at Lorain County Community College. "This program will increase the number of people in the talent pipeline while keeping training affordable for students. It recognizes that our success in growing new jobs through innovation rests on strategic and ongoing collaboration with industry, workforce and education partners," **said Marcia Ballinger, Ph.D., president of Lorain County Community College.**

"Providing the future workforce with skills for the next generation of innovative smart devices and systems is critical to grow our driver industries. Team NEO supports the TRAIN Ohio program and the opportunity it presents to enhance our local manufacturers' ability to keep pace with the constant innovation associated with these advanced products," **states William Koehler, CEO of Team NEO.**

Microelectronics is an exciting and growing field in Ohio. Kraig interns at SMART Microsystems Ltd and NanoBio Systems, Bill at RBB, and Sheradowa at SMART Microsystems Ltd. while earning their degree in Micro Electrical Mechanical Systems (MEMS) at Lorain County Community College. Sheradowa found this program through OhioMeansJobs, Bill is a US Army Vet, and Kraig just thought this degree was exciting, so exciting, in fact, that he's received two job offers for full-time employment upon graduation in May, 2017.

**Terri Burgess Sandu, Director
Talent and Business Innovation
Lorain County Community College**

Ohio TechNet Student Testimonials

"It's unbelievable that I have no field experience but because I learned a needed skill I am making twice as much per hour as many of those who have worked for longer than I've been alive. The courses took a lot of sacrifice, but if I can do it, anyone can. A year ago I entered the program with no welding skills or experience, but in less than a year later I am certified in Mig, Tig, and Stick." - **Lorain County Community College (LCCC) student**

"I just bought my first home, and never could have done it without the tremendous support and encouragement you gave me!" ~ **This Lakeland Community College student was hired by Demag Crane after completing several welding courses and TIG Welding Certification**

Lorain County Community College's Right Skills Now student was hired full-time at General Plug. A recently laid off credit union manager, she's moving up in a high demand field after completing this 18-week training program.

Lakeland Community College student was hired at Kennbal Fabricating and Welding Inc., earning \$15.00/hour – a significant increase from his prior \$10.50/hour. He credits his welding instructors for "not just teaching me the art of welding – but also passing on great life lessons which will help me become more successful as I grow in the trade!"

Ashley stated that "being enrolled in a hands-on program this time around has made a huge difference." In fact, it has already helped her secure a flexible full-time position as a lab technician. Ashley will graduate from Zane State in December of 2017 and plans to stay in the area. "This is home," Ashley states, "and due to the opportunities that I have been afforded because of my education, my children and I will have a better life."

Brendan was working 2 part-time jobs when he entered the Industrial Welding Program at Lakeland Community College. He completed 5 Welding courses and is now working full-time in the Pipe Industry earning \$26/hour.

Prior to enrolling at Cincinnati State, L. was a waitress earning \$4/hour plus tips. After completing the Accelerated Welding program, she worked with the job coach and accepted a job offer earning \$14.40/hour.

J spent 11 years at Republic Storage as a union worker, but was laid off and enrolled at Stark State College. He received TAA funding and is working to earn his NIMS certification with hopes of becoming a CNC programmer.

"I got to try new things like pipe welding and I love it."
- **Owens Community College Student, Welding.**

A Lakeland Community College student entered the Industrial Welding Program in Spring 2016, working as a welder earning \$15/hour. He successfully completed 4 academic credentials and is currently earning \$18/hour with his new employer.

D enrolled in 2 Accelerate MFG competency-based courses which afforded the flexibility to accelerate completion while working full-time as he pursued a CNC Technology certificate at Sinclair Community College. D tested out of sections where he had competency, spending the majority of his time learning new material. He finished his first two courses in 8 weeks, enabling him to enroll in a third course without having to wait for another semester to begin.

"It was a complete pleasure to go through the Right Skills Now Program. I had a great experience and as an older student who had never been to college, I learned a lot about myself and stretching myself outside of my comfort zone. I'm grateful for the opportunity to learn these new skills and I continue to learn and be challenged in my new position."
- **TAA Worker trained in the Lorain County Community College Right Skills Now program**

Raven was earning \$10/hour working in unskilled labor before enrolling at Tri-C. He excelled at welding, earning three American Welding Society (AWS) certifications during a ten-week training program and landed an internship at Great Lakes Towing. After starting the internship, Raven was hired on full-time with a pay raise, earning \$17/hour. "The entire experience has changed my life one hundred times over and I can finally say I have a career that will take me all over the world."

Paul was unemployed and began Industrial Welding classes at Lakeland Community College. He's completed 11 Welding Courses, earning numerous American Welding Society Certifications and obtained employment as a spot welder earning \$15.00/hour and is on the supervisory track with his new employer.

A Train OH student at Lorain County Community College stated, "This has been a great experience so far and I'm just getting started. This is a program that I would recommend to anybody who has any interest in how things, like how your phone, really work or what it takes to make all those tiny little microscopic devices work together to make your phone, tv, car, blood pressure machines, and thousands of other things in our world function. The words "That's so cool!" are not uncommon in our classrooms and labs. That's one of the main reasons why I'm doing this degree. Every day is cool."