

Lake Campus Workforce Development Center Project

Overview

Wright State University Lake Campus seeks to transition its existing Business Enterprise Center into a new Workforce Development Center. The expansion of this already successful program will further assist manufacturers in west central Ohio with their immediate and future employment needs. It will also facilitate synergies with the Lake Campus academic programs in Engineering. The new facility will be approximately 10,000 square feet of flexible lab space, instructional space, and an area to showcase the products of sponsoring manufacturers.

Rationale

Manufacturing companies in west central Ohio need a stable workforce to remain at their current locations. But Auglaize, Darke, Mercer and Shelby counties will need to replace at least 6,500 skilled employees in the next three to five years just to maintain current employment levels. Equipment grants from the Ohio Department of Higher Education have provided the Lake Campus with \$272,834 of equipment over three funding cycles to assist in the retention and expansion of existing businesses and further entrepreneurship by addressing regional talent and workforce needs. It also provides valuable experience for Lake Campus Engineering students. Additional space would allow for more effective utilization of this equipment as well as the development of new Business Enterprise Center credentials, certificates and apprenticeships that are tailored to the evolving needs of the region's thriving manufacturing industry.

Sustained Growth and Present Economic Conditions

- The Lake Campus has enjoyed the highest percentage increase (55.3%) in enrollment of any of Ohio's 24 regional campuses since 2014 due largely to the addition of programs in Engineering (2010) and Nursing (2015).
- Applications to Lake Campus for Fall 2021 are 33% higher relative to the same point in time for the past two years and bode well for the Lake Campus class of 2025.
- More than 60% of Lake Campus students come from two counties: Mercer (36.1%) and Auglaize (27.1%). The region has embraced a "grow your own" philosophy. The Lake Campus is uniquely positioned meet the needs of employers in these counties.
- Mercer County consistently has the lowest unemployment rate in Ohio (currently 2.6%) with Auglaize County close behind (3.3%). Manufacturing accounts for 31.4% of total earnings in Mercer County and 40.0% in Auglaize County.
- Mercer County is investing in new industrial parks (three tracts are in development to be JobsOhio "authenticated sites"). All lots in an 80-acre park that was completed in 2020 were sold within four months. The County expects that manufacturing employment and revenue will continue at a rate of 10% annual growth and that at least two new 100+ employee companies will be added in each of the next ten years.

Demand for a Skilled Workforce and Expected Future Growth

Key findings from the 2021 Deloitte and The Manufacturing Institute Manufacturing Talent study include: US manufacturing is expected to have 2.1 million unfilled jobs by 2030; the pace of digital transformation in the manufacturing industry will continue to redefine work for

humans; and there is a need for the creation of pathways to tomorrow's jobs today¹. The Ohio Department of Job and Family Services 2018-2028 employment projections² are consistent with this national perspective and predicts 25,386 annual job opportunities in Ohio on average with annual pay of more than \$63,500 in the Advanced Manufacturing Industry Cluster.

Locally, Mercer County and its neighboring Auglaize, Darke and Shelby Counties project that at least 2,100 new Manufacturing, Skilled Trades, or Engineering jobs will be created in the region each year for at least the next eight to ten years (1,200 jobs have been posted in Hometown Opportunity in the first five months of 2021 alone). Supply chain and support industry considerations continue to make west central Ohio a favorable environment for the start-up of more advanced manufacturing companies (such as Mercer County's Raymath Manufacturing, Zuma Machine, and Innovative Machining in 2020) that will have 100+ employees at maturity.

Ohio County	Current Mfg. Companies	Mfg. Total Employment	Mfg. Employees	Ranking of Mfg. Density
Auglaize	85	29.4%	8,241	26 th
Darke	79	18.3%	4,958	45 th
Mercer	82	25.2%	6,840	35 th
Shelby	122	37.5%	12,685	17 th
Total/average	368	27.6%	32,724	

Strong community support

- The Tri Star Career Compact intentionally located across the street from the Lake Campus in 2019 to capitalize on a partnership with Lake Campus around workforce development.
- Local community members and companies have donated \$549,682 in support of a Lake Campus Workforce Development Center project.
- The Engineering Advisory Board at Lake Campus is comprised of faculty and staff from both the Lake and Dayton campuses, as well as small and large companies in west central Ohio. This board will be engaged in the launch of new offerings in the Business Enterprise Center and academic offerings to maintain awareness of Lake Campus services and to ensure an alignment with evolving workforce needs.

Existing Business Enterprise Center (BEC) Offerings and Expansion in the Workforce Development Center

The BEC provides economical, comprehensive counseling and management training to new and existing businesses in the region by promoting and supporting entrepreneurs with experienced business consultants and by providing advanced technical training in specialized areas of manufacturing with a blend of online classes and hands-on validation labs.

The Business Enterprise Center partners with American Trim, Eaton Corporation and Danone North America to offer two state-approved apprenticeships (Tool and Die, and Industrial Maintenance). Each apprenticeship is three years in length with an average cost of \$3,456 per

¹ <https://www2.deloitte.com/us/en/insights/industry/manufacturing/manufacturing-industry-diversity.html>

² https://ohiolmi.com/portals/206/proj/jobsohio/industry_snapshots/AdvancedMfg.pdf

year. The BEC also offers a module-based program (SkillsTrac) with five levels of completion. Ohio's Lt. Governor John Husted has observed that "There are over 93,000 jobs in Ohio right now on OhioMeansJobs.com that pay \$50,000 a year or more. The jobs are abundant. The training is available, and in most cases the training is free."³

The BEC worked with five active apprentices and 49 active SkillsTrac students in FY20. Based upon current trajectories we expect to increase both areas to the maximum current capacity of ten apprentices and 70 SkillsTrac students in FY22.

Year	Entrants	Completers
FY20	54	37
FY22 and FY23 (goal)	80	56
FY24 (with added space)	130	110

The addition of the Workforce Development Center will allow expansion into additional apprenticeship programs (e.g., Machinist, Maintenance Electrician, CNC Operator, or even perhaps non-BEC related areas such as Nurse Assistant, and Manager of Food Service) as well as new, already approved in-demand TechCred offerings (e.g., Robotics, Automation and System Integration Technology, Industrial Skills Technology, and Industrial Technology 3D Printing) that the region needs. It should be noted that additive manufacturing and robotics equipment that has already been awarded through ODHE grants cannot be utilized efficiently for training purposes without new space due to safety considerations.

Lake Campus Career Services will also be integrated into the Workforce Development Center. One current Career Services Advisor, funded through a Career Services Fee approved by the Board of Trustees in 2018 provides free, lifetime support to students and alumni. The proposed Workforce Development Center will provide a suitable office space for the advisor to not only perform their current job functions, but to better network with potential employers and connect students to BEC clientele for internships, co-ops and experiential learning opportunities.

Finally, the Workforce Development Center would also allow the Lake Campus to host MakerSpace events where corporate partners or even individuals come with an idea and leave with a finished prototype made with supervision from Lake Campus staff and state-of-the-art equipment that they could not afford to purchase. Participants in MakerSpace will be billed for the cost of consumables and their usage of the center.

Impact on Academic Programs

	2014	2015	2016	2017	2018	2019	2020	% change
WSU- Lake Campus	1,142	1,162	1,330	1,410	1,534	1,667	1,773	55.3
OH Regionals, total	58,951	58,542	58,162	57,715	58,206	58,079	63,880	8.4

The Lake Campus has enjoyed the highest percentage increase in enrollment of any of Ohio's 24 regional campuses since 2014. The number of degrees awarded in that time span has also increased significantly (from 124 in Spring 2016 ceremony to 240 in Spring 2021). The 33%

³ ([Husted highlights career pathways during stop in Sidney - Sidney Daily News](#))

increase in applications for Fall 2021 will translate to a new record enrollment for the Lake Campus even with the record number of graduates this year.

We anticipate that new certificates that will be available through the expanded BEC will also appeal to prospective degree-seeking Engineering students as they consider credentials that will make them even more helpful to local companies. The feasibility of using these possible new certificates as the core of 2-year degree programs will also be explored.

The expansion of BEC programming and degree options like the recently approved AAS in Electrical Engineering Technology will enhance enrollment efforts by providing a comprehensive pathway for non-traditional students (as well as those from nearby institutions like the Tri Star Career Compact) through Associates degrees at the Lake Campus to Bachelors and graduate degrees at the Dayton Campus.

Investment and Payback

\$549,682 in donations that can be used as matching funds for this project have accumulated since the beginning of the “Rise. Shine.” Capital Campaign in 2015. An additional \$1,000,000 in matching funds is requested to utilize \$1,500,000 allocated for new space associated with a Lake Campus Workforce Development Center in Ohio’s Capital Bill.

Lake Campus Administration (WSU Level 5: LAKEA) will be paying back to the University the \$1,000,000 in matching funds at the rate of \$100,000 per year for ten years beginning in FY24.

The State Capital Bill also provides \$500,000 for renovation/repurposing of the existing space where the Lake Campus Engineering program and Business Enterprise Center currently reside.

Expansion of Business Enterprise Center activities (e.g., new apprenticeships and TechCred credentials, MakerSpace) and business services will generate new annual revenue of \$118,103 from not-for-credit activities that will cover the debt service payment starting in FY24, when the new Workforce Development Center is fully operational.

Workforce Development Center Revenue	FY20 (5 apprentices, 49 SkillsTrac)	FY22/FY23 (10 apprentices, 70 SkillsTrac)	FY24 (new space) (15 apprentices, 85 SkillsTrac, 30 TechCred)
All Manufacturing Training	\$83,992	\$129,864	\$167,567
NEW TechCred Training	\$0	\$0	\$60,000
Sponsor Space Rental	\$0	\$0	\$6,000
MakerSpace	\$0	\$0	\$14,400
Gifts, Contributions, and Other Revenue	\$7,650	\$8,000	\$8,000
Grants Goal	\$0	\$25,000	\$25,000
Total	\$91,642	\$162,864	\$280,967

Appendix

BEC Key Performance Indicators (KPIs) for annual reporting and analysis

Entrants and Completers: The number of students who begin training programs with the BEC (entrants) and the number of students who complete credentials for a given year (completers) will continue to be tracked with a goal of 130 entrants and 110 completers in FY24.

BEC Volume metrics: Students/trainees in labs and student/trainee lab hours will continue to be measured and evaluated for trends that suggest areas of opportunity. Overall trainee usage is expected to increase by 75% in FY24. Student usage is expected to increase by 20% as Engineering faculty adjust their laboratory instruction to better utilize in-hand equipment.

Completion Rate: Present completion rate is 69%, but a goal of 75-80% completion will be achievable with improved equipment utilization, scheduling and new training opportunities.

Compliance: The BEC will monitor and continue to maintain its perfect record of compliance with regulatory, safety, or other standards and requirements.

Student/Corporate Partner satisfaction: Monthly feedback will continue to be sought and acted upon regarding customer (company and student) satisfaction with the BEC, training, and services provided.

Metrics for Academic Program Success

Metrics of Engineering program success are aligned with those required for ABET accreditation and include one or more of the following: graduates being professionally employed in technical or entrepreneurial positions; interacting with their peers through technical societies and technical communications (articles, reports, design documents, etc.); leading or participating in project teams; and developing expertise in an area involving specialized software or instrumentation. Assessment of student success includes artifacts that demonstrate the student's ability to: solve complex engineering problems by applying principals of engineering, science, and mathematics; apply engineering design solutions that meet the needs of public health, safety, and welfare; communicate effectively with a wide range of audiences; recognize ethical and professional responsibilities in engineering situations; analyze and interpret data; and to acquire and apply new knowledge as needed.

Unit Level : Department					
College : Lake Campus (LAKE)					
Department :Lake Campus Engineering Technology (LCH55)					
Student FTE-to-faculty ratio per department					
	Fall 2015	Fall 2016	Fall 2017	Fall 2018	Fall 2019
FTE Student Credit Hours	89.73	84.73	84.67	101.93	97.73
TET&NTE Faculty	3	3	3	4	4
Ratio (FTE Student Credit Hours/TET&NTE Faculty)	29.91	28.24	28.22	25.48	24.43
Revenue and Expenses					
	2015	2016	2017	2018	2019
Revenue*Indirect Research Expenditure	\$788,383.10	\$1,095,268.71	\$1,134,833.30	\$1,339,951.22	\$1,353,833.03
Expenses	\$558,918.30	\$430,535.55	\$409,468.03	\$453,359.99	\$249,905.64
Ratio (Revenue*Indirect Research Expenditure/Expenses)	1.41	2.54	2.77	2.96	2.46