

Business Advisory Council

Welcome!

We will begin our meeting in just a
few minutes.



educational service center
of Central Ohio



Today's Agenda

Welcome

Industry Credential Analysis

OSA Internship Experience

Governor's Office of Workforce Transformation – TechCred

Coordinated Networking

Closing



K-12 Industry Credential Analysis: Ohio

November 2022



Industry credentials in K-12

What trends are we seeing? What do we know?

States are increasingly focused on industry credentials as a means of signaling that students possess important career readiness skills.

A 2020 survey of states revealed that:

- **35** maintain an approved credential list;
- **31** include credentials in accountability systems (ESSA, Perkins V, and/or state accountability);
- **14** include credentials as part of a graduation requirement or special designation;
- **18** allocate state funds to support credentials in K-12;
- **16** award incentive funding based on credential attainment.

Not all industry credentials are created equal. They vary widely with regards to how states define them, which level of skills they represent, and whether employers really value them.



Only 18%

of the credentials earned by K-12 students are demanded by employers.

Source: CredentialsMatter.org, 2020



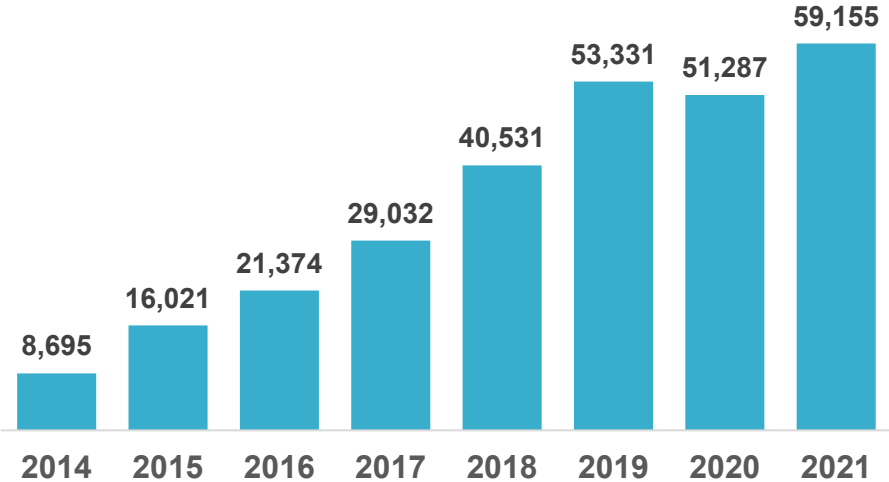
Ohio Context for Industry Credentials

Ohio has prioritized industry credentials as an important signal of career preparedness in K-12.

Policies, Programs and Investments

- Graduation Requirements
- CTE Programs
- Credential Exam Fee Reimbursements
- Senior-Only Credential Programs
- IWIP Financial Incentives
- Accountability Indicators

Credentials Earned by Graduation Cohort



Source: [OH Industry Recognized Credentials Dashboard](#)



Ohio K-12 industry credential analysis

This analysis addresses key questions about Ohio’s promoted industry credentials in K-12.

- 1. **Are promoted industry credentials aligned with employer demand?**
- 2. **Are credentials earned by students aligned with employer demand?**

Methodology: Key Terms

Advertised Wages

The wages advertised for OH job postings that requested each credential.

Five-year average wages, sub-bachelor’s degree

Earned Credentials

Credentials* that were earned by the 2020 Graduation Cohort.

Demand

The number of OH job postings that requested each credential.
Two-year average annual postings

Promoted List

Credentials* included in Ohio’s 2022 Master Credential List.

⁶ *The total counts of earned and promoted credentials may not match ODE lists. To best capture and align employer demand, we combined a few similar credentials.



There is significant misalignment between the credentials promoted and earned – and what employers demand.

Our analysis examined both the credentials on the current promoted list and those earned in 2020.

Promoted List (2022)

How aligned is the promoted credential list?

464 promoted credentials

102 promoted credentials are in demand*

22% of the list are in-demand* credentials

Earned Credentials (2020)

How aligned are the credentials students earn?

51,287 total credentials earned

191 unique credential names

20% credentials earned are in demand*

* In-Demand: At least 25 job postings per year, wages above \$14.90, not general career readiness, not oversupplied



Credential alignment by classification

Most of the credentials promoted and earned are not demanded by employers.

Promoted Credentials	Earned Credentials	Classification	Definition
7 (2%)	549 (1%)	Aligned credentials	The number of credentials earned is roughly equal to the number requested in job postings.
14 (3%)	8,450 (16%)	Oversupplied credentials	More credentials earned than requested in employer job postings, but some registered employer demand
114 (25%)	10,164 (20%)	Undersupplied credentials	Far more annual job postings requesting the credential than earned
314 (68%)	13,342 (26%)	Not demanded	Credentials with fewer than 25 average annual job postings
15 (3%)	18,782 (37%)	General career readiness	Credentials that reflect general skills that are not occupation-specific (e.g., basic reading, math, financial and digital literacy, workplace safety and basic life support or first aid).



Top 15 credentials earned

12 of the top 15 credentials earned are not demanded by employers, oversupplied, or are general career readiness certifications

Credential Name	Earned Credentials	Annual Demand	Advertised Wages	Classification
CPR First Aid	9,111	184	***	General Career Readiness
Occupational Safety and Health Administration (OSHA 10/30)	9,038	2,591	***	General Career Readiness
National Incident Management System 100	2,227	279	\$51,819	Oversupplied
Ohio Department of Health - State Tested Nurse Assistant (STNA)	1,671	25,104	\$35,238	Undersupplied
National Incident Management System 700	1,558	153	\$51,128	Oversupplied
National Restaurant Association - ServSafe Unspecified	1,445	7,136	\$35,679	Undersupplied
National Center For Construction Education & Research (NCCER) - Core Certification	1,329	14	***	Not Demanded
Career Connection Certificates	1,179	0	***	Not Demanded
National Incident Management System 200	1,179	129	\$51,823	Oversupplied
National Incident Management System 800	1,119	88	\$56,214	Oversupplied
Microsoft Office Specialist - Word	990	11	***	Not Demanded
Occupational Safety and Health Administration (OSHA) - Forklift Operator	930	4,960	\$34,469	Undersupplied
American Welding Society - Certified/Qualified Welder	872	615	\$51,287	Oversupplied
RISE Up Retail Industry Fundamentals	863	3	***	Not Demanded
Ohio Department of Job and Family Services (ODJFS) - Communicable Disease Prevention for Childcare Personnel	704	4	***	Not Demanded



Aligned credentials

Only 7 credentials have similar numbers of credentials earned vs. requested in job postings.

2% (7)

Supply roughly equals demand

1% of credentials earned

Credential Name	Earned Credentials	Annual Postings	Advertised Wages
ASE - Automobile Series: Manual Drive Train and Axles	138	252	\$51,593
ASE - Collision Repair and Refinish Series: Structural Analysis and Damage Repair	121	131	\$58,755
ASE - Automobile Series: Automotive Automatic Transmission/Transaxle	104	155	\$53,502
Google Analytics Certification	73	130	***
Google Adwords Certification	64	78	***
Federal Aviation Administration (FAA) - Airframe Mechanic	26	34	***
Entrepreneurship and Small Business Certification	23	26	***



Ample demand but low wages

Three aligned credentials lead to with low-wage jobs.

3

Promoted credentials have more than 25 average annual postings but post wages less than \$14.90

Credential Name	Earned Credentials	Annual Postings	Advertised Wages
Council for Professional Recognition - Child Development Associate Credential (CDA)	154	3,449	\$26,379
National Restaurant Association - ServSafe Food Handler	21	2,575	\$29,635
ASE - Parts Specialist Series: Medium/Heavy Truck Parts Specialist	0	82	\$30,114



Oversupplied credentials

Several oversupplied credentials account for a notable portion of credentials earned.

3% (14)

Promoted credentials with more credentials earned than average annual postings

16% of credentials earned

Credential Name	Earned Credentials	Annual Postings	Advertised Wages
National Incident Management System 100	2,227	279	\$51,819
National Incident Management System 700	1,558	153	\$51,128
National Incident Management System 200	1,179	129	\$51,823
National Incident Management System 800	1,119	88	\$56,214
American Welding Society - Certified/Qualified Welder	872	615	\$51,287
Microsoft Office Specialist - Excel	297	29	\$48,673
ASE - Automobile Series: Engine Performance	273	161	\$58,807
ASP Baton Certification	269	105	\$37,088
Ohio Agribusiness Association (OABA) - Agribusiness and Production Systems Certification	159	67	\$38,933
HAZWOPER Certification	147	72	\$41,041
ASE - Collision Repair and Refinish Series: Painting and Refinishing	143	38	\$46,136
ProStart Certificate of Achievement	123	27	***
Association of Public-Safety Communications Officials (APCO) Fire Service Communications	57	46	\$39,888
Association of Public-Safety Communications Officials (APCO) Law Enforcement Communications	27	27	\$37,001



Undersupplied credentials

A sizeable number of promoted and earned industry credentials are undersupplied.

25% (114)

Promoted credentials have fewer than half as many earned as annual postings (min. 25 postings)

20% of credentials earned

Credential Name	Earned Credentials	Annual Postings	Advertised Wages
Ohio Department of Health - State Tested Nurse Assistant (STNA)	1,671	25,104	\$35,238
National Restaurant Association - ServSafe Unspecified	1,445	7,136	\$35,679
Occupational Safety and Health Administration (OSHA) - Forklift Operator	930	4,960	\$34,469
ASE - Automobile Series: Brakes	593	2,166	\$61,223
ASE - Automobile Series: Maintenance and Light Repair	545	5,416	\$56,038
Ohio State Board of Cosmetology - License of Cosmetology	541	1,166	\$36,676
ASE - Automobile Series: Electrical/Electronic Systems	472	2,160	\$57,268
ASE - Automobile Series: Engine Repair	335	1,841	\$52,605
ASE - Medium/Heavy Truck Series: Suspension and Steering	325	838	\$47,072
ASE - Automobile Series: Suspension and Steering	323	1,623	\$59,877
Firefighting	223	1,061	\$42,877
National Healthcareer Association (NHA) - Certified Phlebotomy Technician (CPT)	219	2,007	\$40,915
ASE - Automobile Series: Heating and Air Conditioning	195	1,229	\$61,260
ASE - Medium/Heavy Truck Series: Diesel Engines	176	902	\$50,468
ASE - Automobile Series: Automobile Service Technology	164	1,116	\$47,177



Undersupplied credentials

About half of undersupplied credentials meet Ohio's Top Jobs wage threshold.

12% (55)

Promoted credentials are undersupplied **and** meet the following criteria:

- At least 25 average annual postings
- Wage greater than \$14.90
- At least half of postings request less than a Bachelor's degree

Credential Name	Annual Postings	Earned Credentials	Advertised Wages
Ohio State Board of Nursing - Licensed Practical Nurse	28,889	15	\$57,328
Ohio Department of Health - State Tested Nurse Assistant (STNA)	25,104	1,671	\$35,238
National Restaurant Association - ServSafe Unspecified	7,136	1,445	\$35,679
EMT/EMS	5,673	87	\$46,943
Ohio State Board of Pharmacy - Certified Pharmacy Technician (CPhT) (ExCPT)	5,625	31	\$37,748
ASE - Automobile Series: Maintenance and Light Repair	5,416	545	\$56,038
Occupational Safety and Health Administration (OSHA) - Forklift Operator	4,960	930	\$34,469
National Healthcareer Association (NHA) - Certified Patient Care Technician (CPCT)	3,819	69	\$36,349
American Medical Technologists (AMT) - Medical Assistant	2,536	24	\$46,094
ASE - Automobile Series: Brakes	2,166	593	\$61,223
ASE - Automobile Series: Electrical/Electronic Systems	2,160	472	\$57,268
North American Tech Excellence (NATE) - HVAC Cert	2,091	0	\$43,718
EPA - Refrigerant Recovery Universal	2,038	135	\$49,781
National Healthcareer Association (NHA) - Certified Phlebotomy Technician (CPT)	2,007	219	\$40,915
ASE - Collision Repair and Refinish Series: Mechanical and Electrical Components	1,859	94	\$48,342



Credentials that are not demanded

Most credentials promoted in K-12 are not demanded by employers.

68% (314)

Promoted credentials do not register meaningful labor market demand (fewer than 25 postings statewide)

26% of credentials earned

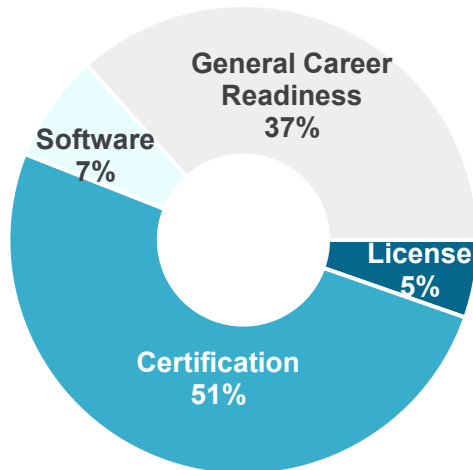
Credential Name	Earned Credentials	Annual Demand
National Center For Construction Education & Research (NCCER) - Core Certification	1,329	14
Career Connection Certificates	1,179	0
Microsoft Office Specialist - Word	990	11
RISE Up Retail Industry Fundamentals	863	3
Ohio Department of Job and Family Services (ODJFS) - Communicable Disease Prevention for Childcare Personnel	704	4
National Center For Construction Education & Research (NCCER) - Level 1 Certification (Unspecified)	702	8
Ohio Children Trust Fund (OCTF) - Child Abuse Awareness and Prevention	683	7
Microsoft Office Specialist - Powerpoint	647	19
Adobe - Photoshop	644	4
Occupational Safety and Health Administration (OSHA) - Manlift Operator	443	2
RISE Up Customer Service and Sales	419	3
Adobe - Illustrator	356	4
FANUC Certification - Handling Tools	284	3
American Medical Certification Association (AMCA) - Physical Therapy Aide Certification	284	0
CompTIA Strata IT Fundamentals	279	12



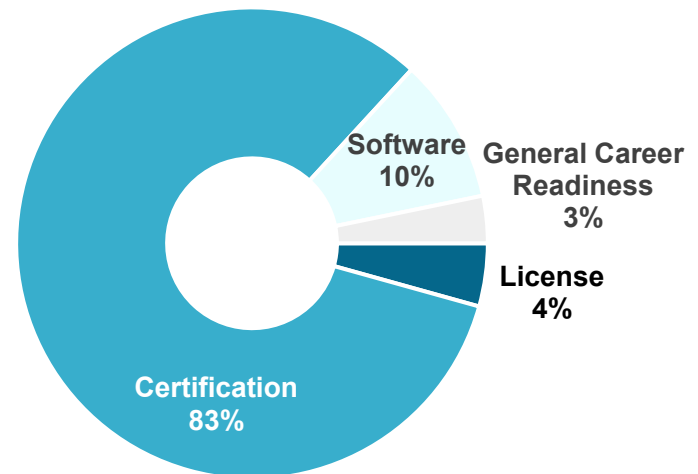
General career readiness credentials

General Career Readiness comprise 3% of the promoted list, but 37% of credentials earned.

Earned Credentials (2020)



Promoted List (2022)



General career readiness credentials

The top two most earned credentials in 2020 were general career readiness credentials.

35% (18,149)

of the 51,287 credentials earned in 2020 were either CPR First Aid or OSHA 10/30 hour

Credential Name	Earned Credentials	Annual Postings
CPR First Aid	9,111	184
Occupational Safety and Health Administration (OSHA 10/30)	9,038	2,591
Internet and Computing Core Certification (IC3)	317	4
Bleeding Control Basic 1.0 Course	307	1
Safeland	5	39
Leadership Excellence - Student	4	0
Multi-Craft Core Curriculum (MC3)	0	0
Ohio Drivers License	0	184,211
Unspecified - Leadership Certificates	0	8
Soft Skills Pro	0	5
Internet and Computing Core Certification (IC3) - Digital Literacy	0	1
3M: Head, Eye and Face Protection	0	0
3M: Hearing and Noise Protection	0	0
3M: Respiratory Protection	0	0
Franklin Covey: Leader In Me	0	0



IWIP credentials

63% of the credentials on the state's IWIP incentive funding list are not demanded by employers.

110

IWIP Credentials

24% of promoted list

- **63%** Not demanded
- **2%** Oversupplied
- **32%** Undersupplied

Credential Name	Earned Credentials	Annual Postings	Advertised Wages	Alignment Category
NCCER - Core Certification	1,329	14	***	not demanded
Career Connection Certificates	1,179	0	***	not demanded
American Welding Society - Certified/Qualified Welder	872	615	\$51,287	oversupplied
FANUC Certification - Handling Tools	284	3	***	not demanded
CompTIA Strata IT Fundamentals	279	12	***	not demanded
Firefighting	223	1,061	\$42,877	undersupplied
Ohio State Apprenticeship Council Recognized Pre-Apprenticeship Program Certificate of Completion	218	0	***	not demanded
Motoman DX100 Basic Programming w/Material Handling	165	6	***	not demanded
EPA - Refrigerant Recovery Core + Level 1	162	1,490	\$49,931	undersupplied
Council for Professional Recognition - Child Development Associate Credential (CDA)	154	3,449	\$26,379	undersupplied
HAZWOPER Certification	147	72	\$41,041	oversupplied
EPA - Refrigerant Recovery Universal	135	2,038	\$49,781	undersupplied
Microsoft Technology Associate (MTA) - Developer	124	7	***	not demanded
Microsoft Technology Associate (MTA) - IT Infrastructure	115	3	***	not demanded
National Institute for Metalworking Skills (NIMS) - Machining	114	5	***	not demanded



Employer signaling

The credential universe is large: are employers asking for what they value?

Employers play an important role in signaling the value that each credential offers in terms of employment, wage and advancement decisions. However, they do not always communicate which credential(s) and/or credentialing entities they trust and value.

Two easy steps employers can take to improve signaling:

1. Listing the credentialing organization and full name of the credential in job postings
2. More clearly specifying whether credentials are required vs. preferred



Next steps

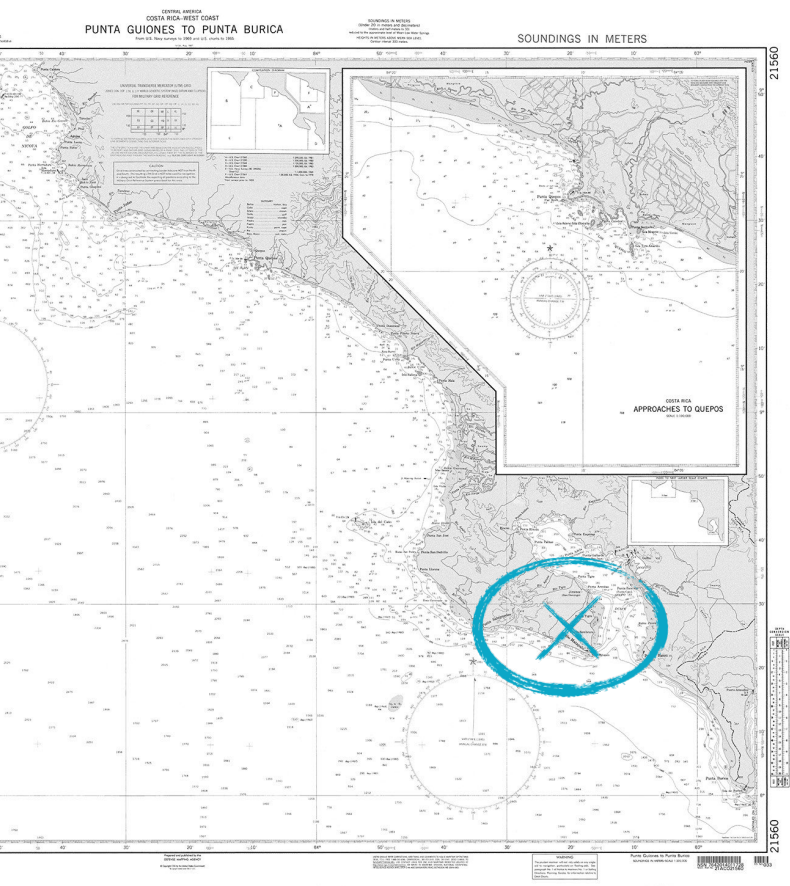
Opportunities for Ohio to ensure credentials have their desired impact for students

- 1. Address alignment of promoted credentials to focus on value to employers, students and communities.**
 - Engage state and regional employers to address signaling concerns.
 - Send a clear message to educators, students and families about which credentials “matter” most.
- 2. Ensure that industry credentials are connected to intentional pathways to college and career.**
 - Highlight and promote connected credentials that are part of a pathway in a valued occupational field.
 - Reward a set of linked experiences that can include a combination of earning postsecondary course credit, attainment of a valued credential and/or engaging in a work-based learning experience.
- 3. Focus on outcomes: Connect student experiences and credential attainment to postsecondary, wage and employment data.**
 - Are credentials part of intentional high-quality pathways?
 - Which students have access to high-quality pathways vs. others?
 - Which credential(s), experiences and pathways have the best “return on investment” for students, communities and the state?



2022 High School Internship

Program Overview



About OSA

FOUNDED:

2015

HISTORY:

Software engineering and IT managed services provider headquartered in Columbus, Ohio. Our customers are non-profit organizations, government agencies and businesses with teams of one to 5,000 employees. OSA leadership has a combined 40+ years of software engineering and technology industry experience

Internship '22

- 9-week program to provide students an opportunity to attain technical training and professional certifications that can complement and enhance a tech career path
- Our goal was to help bridge a gap between education and real-life experience







Topics Learned

CYBRARY

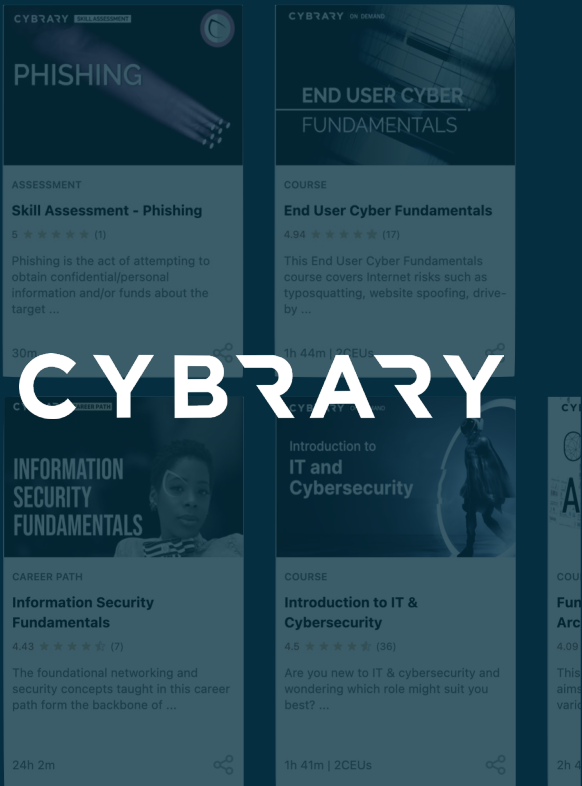
Cybrary helped provide a learning curriculum, path, and certifications the students could take into the real world



Students gained real-world experience with support requests and onboarding a new company partnering with OSA



Students big project was to help create the OhioX sticker to represent Ohio Tech Day, an annual celebration of tech around Ohio



About Cybrary

Cybrary is a world-class cybersecurity training platform that we utilized as a jumpstart to our student's learning path

TOPICS COVERED INCLUDED:

- Cybersecurity fundamentals
- Mobile security
- Cloud architecture
- Command Line & Powershell Basics



464

TOTAL LEARNING HOURS

2,651

LEARNING ACTIVITY INTERACTIONS

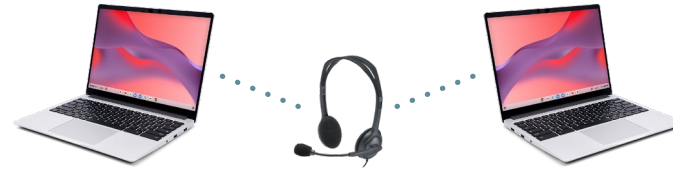
12

CERTIFICATIONS EARNED

80%

AVERAGE SCORE
On Network Security Troubleshooting, Linux Fundamentals, and TCP/IP Protocols Assessments

Student Real-World Scenarios



Interns installed new software on a company's computers and interacted with employees



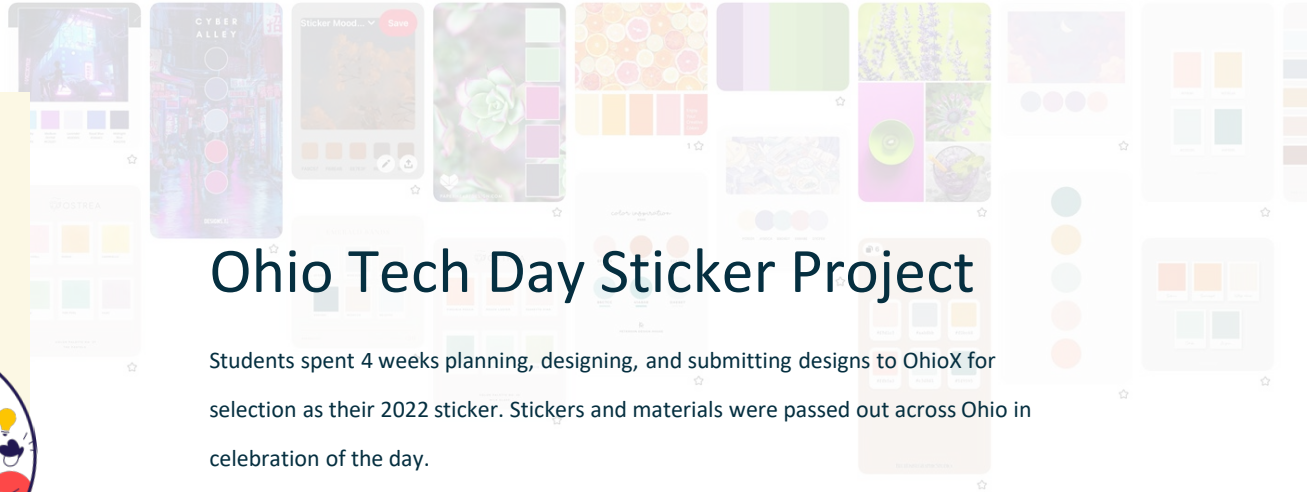
Setup integrations with JumpCloud, Azure AD, SOPHOS and more

INSECURE INC

Helped develop our demo company, "Insecure Inc."

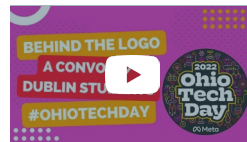


18 Pins



Ohio Tech Day Sticker Project

Students spent 4 weeks planning, designing, and submitting designs to OhioX for selection as their 2022 sticker. Stickers and materials were passed out across Ohio in celebration of the day.





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Thank You!

Governor's Office of Workforce Transformation



Eric Leach

Deputy Director, Governor's Office of Workforce Transformation



<https://workforce.ohio.gov/initiatives>



Time to Network

Conversation Areas

- What is currently on the ODE credential list? What are schools offering? What would employers like to see?
- How can we incorporate earning industry credentials into our curriculum/internships/pre-apprenticeship programs? Accessing resources/funding through OWT (TechCred, H.S. Tech Internships, IRCs)
- Workforce/Educator networking- space to connect with each other
- STEM exploration- how can we use STEM to build career awareness and prepare for credentials?



Exit Survey



Thank you for attending our Business Advisory Council Meeting. Please take a few minutes to complete this exit survey. Data collected will be used to inform the planning of future meetings.



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