

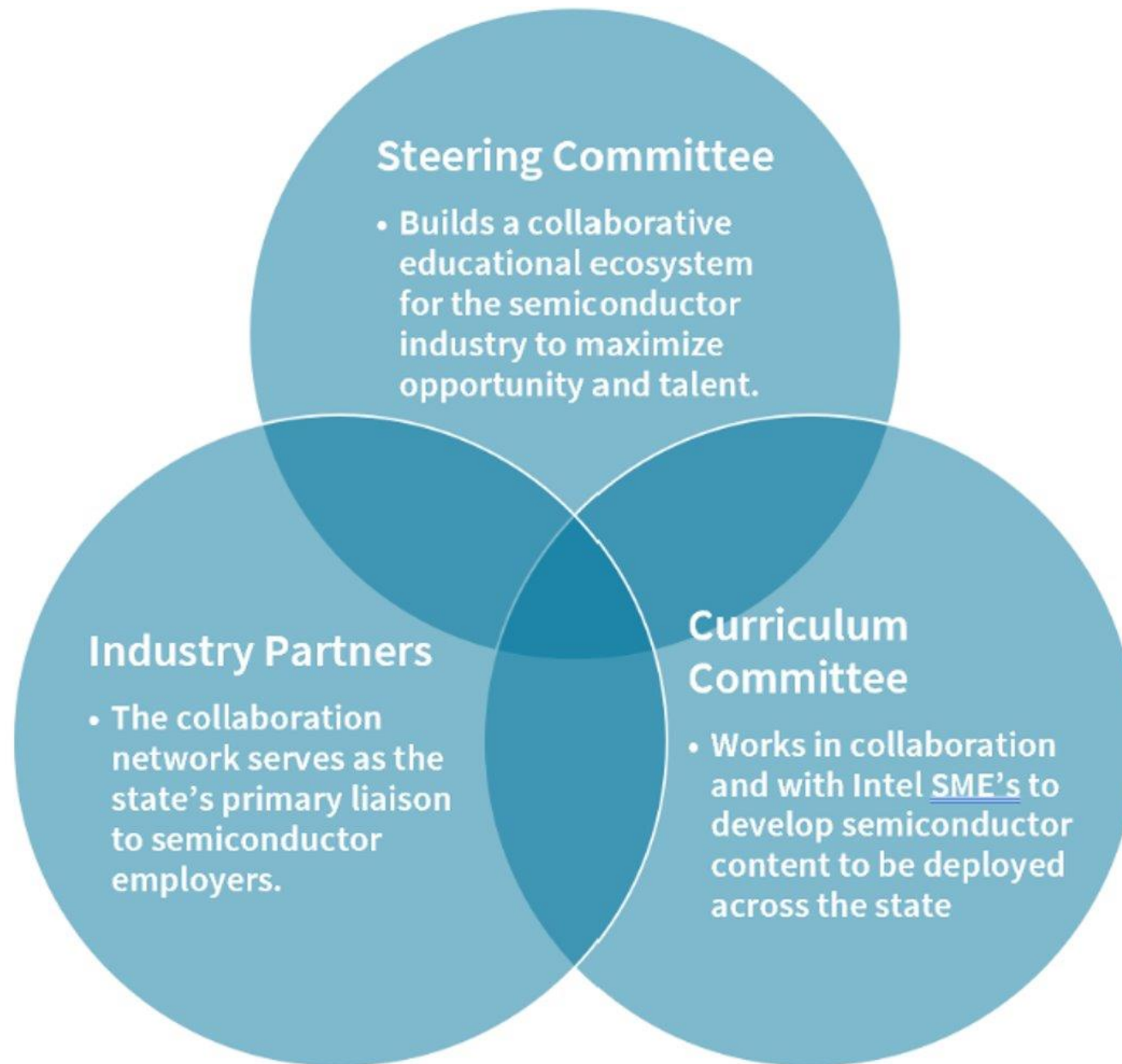
Columbus State Community College

- 45,000 Full and part-time students
- 9,500 dual enrollment students
- Supportive statewide policy
 - Funding for dual enrollment
 - Decentralization but collaboration among 23 community colleges
 - Alignment for Career Technical Assurance Guides
 - Guaranteed Transfer Pathways

Ohio Semiconductor Collaboration Network (OSCN)

- Represents all 23 Ohio community colleges
- Awarded \$2.8 million
- 1 of 8 grant recipients across Ohio to execute regional strategy





COLUMBUS STATE

COMMUNITY COLLEGE

Wafer
Processing

Wafer
Processing
Equipment

Safety

Quality

Vacuum
Systems

Equipment
Operation

Cleanroom
Techniques

Computer
Skills

Scientific
Foundations

Math

Electronics

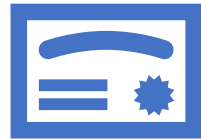
Trouble-
shooting

Preventative
Routine
Maintenance

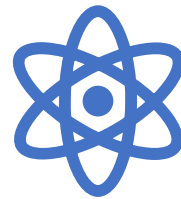
Maintaining
Automated
Systems

80% of the technician skillset resides in existing degree program content

Intentionally built certificate stacks toward degree completion



One-Year
Certificate



Associate of
Applied Science

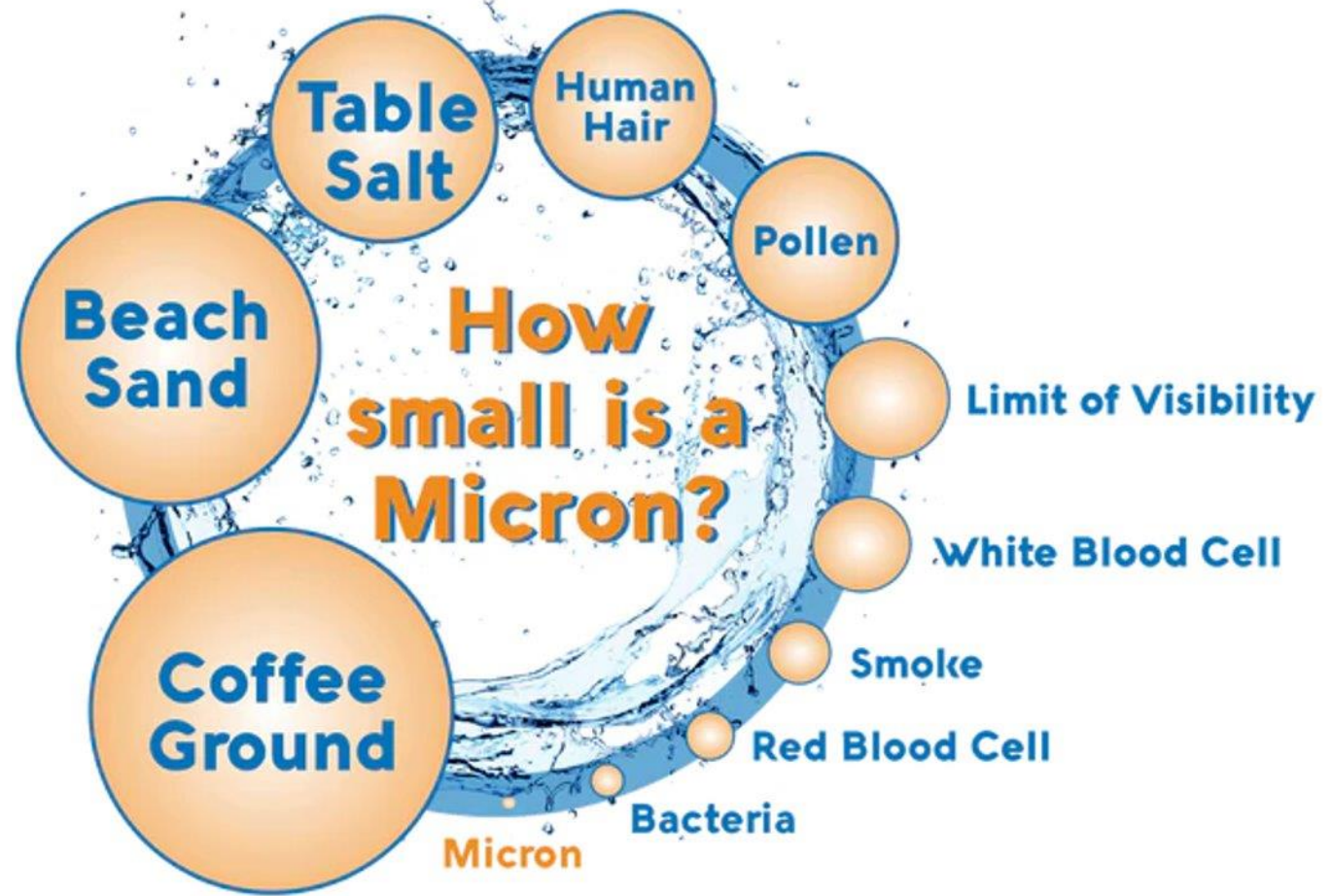


Bachelor of
Applied Science

Implementation Opportunities

- What are the *required* prerequisites?
- How do we support students to meet expectations?
- What is the pathway that is best for a high school student?
- What do high schools need to begin implementation?

Advising



Size and scale are approximate.



Advising/ Recruiting

What's in a Name?

- Manufacturing Mindshift → Engineering Technologies → Advanced Technologies
- Holistic student support
- Scalability of interventions
- College and career readiness

Metrics

Recommended Regional Goals

- 150 high school graduates from the class of 2024 matriculate into advanced technologies degree and certificate programs
- At least four high school or career center partners to enhance or develop advanced technologies pathways on site at their buildings
- Educate 5,000 students, families, and educators about future options in advanced technologies

Next Steps

- Shared information equitably with all superintendents
 - Moving forward with interested districts
- Shared information equitably with all school counselors
- Offered Engineering Technologies Day with industry and faculty leaders
- Continuing to convene superintendent advisory group
- Collaborating to reach students, educators, and support networks at different venues

EmployIndy: Pathway Defined



Industry Demand



Student Voice



**Academic Offerings and
Dual Credit**



Work-Based Learning



**Wraparound
Services**



**Transition
Support**



**Enabling Policy
Environment**



Indiana Enabling Policy Environment

Selection of policies enabling

- [Next Level Programs of Study \(NLPS\)](#): Articulated CTE programs of student and transferability
- [Transfer Single Articulation Pathways \(TSAPs\)](#): Statewide degree transfer and articulation
- [Indiana College Core \(ICC\)](#): College-level coursework in High School
- [21st Century Scholars](#) and the [Frank O'Bannon Grant](#) : Current Funding Opportunities
- House Enrolled Act 1002 – passed in 2023: Career navigation, career advising, career scholarships, etc.

Cybersecurity Blueprint Design

Principles

- Attain an associate degree by “year 13”, leading directly to good jobs and/or further education towards a bachelor’s degree.
- Intentional, integrated curricular experience and integrated student supports.
- Minimize transitions for students and ensure opportunities are available and equitably accessible for all students
- Ultimately, sustainable via public funding and affordable for students.



Industry Demand



- Finding, hiring and retaining qualified tech talent is largest problem facing tech employers today in Indiana
- Every job and industry is tech-related or enabled, and digitization and automation will continue to grow this demand.
- Currently, there are opportunities for more than **17,500 IT jobs** in Indiana, including more than **14,000 Cybersecurity** jobs, yet there are only 4,000 residents with the skills to fill them.
- Building and diversifying high school pathways will allow us to grow our own talent pipeline to support our statewide economy.



Indianapolis Design Team



WARREN
TOWNSHIP



Employ[★]Indy



PURDUE
UNIVERSITY
GLOBAL



INDIANA COMMISSION for
HIGHER EDUCATION

nextech



TECHPOINT



Pathway Vision

The seamless IT Operations and Cybersecurity pathway with program supports and delivery options will allow students to earn an associate's degree and enter an in-demand, good job on an accelerated timeline for free. Upon pathway completion, students will have a clear path to a 4-year degree.

This pilot pathway will provide a launching point for scale across programs and geographies, all aimed at offering cohesive opportunities intentionally designed to increase social and economic mobility.



Student Voice

Students are unsure about the value of college.



This program aims to educate students about different career options and a variety of education paths, including, but not only, a 4-year degree.

Students mentioned feeling stressed and daunted by decisions regarding their futures.



The cohort model and accompanying Persistence Coaches are designed to create a supporting community to ease the stress of choosing a next step.

Students are nervous for college when they do not feel high school courses are rigorous enough.



Embedded dual credit opportunities will help students experience college coursework with their cohort in high school.

Work-based experiences were touted as great facilitators in students choosing fields they do and don't want to study.



The pathway will provide opportunities for many work-based learning activities, including an intensive hands-on experience for each student.



Academic Offerings

General Education Area	Grades 9-10	Grade 11	Grade 12	Postsecondary Grade 13
Written Communication Speaking and Listening 6 PS credits		English 11 (ENGL 111)	Speech (COMM 101) or English 12 (ENGL 111)	
Quantitative Reasoning 6-12 PS credits	Algebra/ Geometry Geometry / Algebra II	Algebra II Quantitative Reasoning (MATH 123) Pre-Calc (MATH 136/137)	Quantitative Reasoning (MATH 123) Pre-Calc (MATH 136/137) Calculus (MATH 211)	MATH 136-137 MATH 211
Scientific 6-12 PS credits	Biology Chemistry / ICP	Chemistry Dual Credit Science	Dual Credit Science	Science 3-6 Credits
Social and Behavioral 3-6 PS credits	World History	US History	Government Dual Credit Psychology	
Humanistic and Artistic 3 PS credits	World Language	World Language Dual Credit Fine Arts	Dual Credit Fine Arts	

Postsecondary coursework is noted in parentheses

Academic Offerings

NLPS / Career Pathway	Explore / Foundational Grades 8-10	Concentrator Grades 11	Capstone Grade 12	Postsecondary Year 13
IT Operations w/ Cybersecurity	Principles of Computing (6 PS credits)	IT Fundamentals (5 PS credits)	Cybersecurity Capstone (6-12 PS credits)	AS Cybersecurity General Ed (12-15 cr) Technical (9-15 cr)
Cybersecurity Specialist		Cyber and Network Operations (6 PS credits)		

Academic Offerings

IVY TECH	IUPUI	PURDUE GLOBAL
AS in Cyber Security/Information Assurance	BS in Informatics (2+2 articulation)	BS in Cybersecurity (2+2: all associate's degree credits transfer)
AAS in IT Support		BS in Information Technology—IT Management (not all associate's degree credits transfer) OR BS in Organizational Management (2+2: all associate's degree credits transfer)

Work-based Learning

WBL Phase	Participation		Activity	Ideal Timing						Activity in Place Already	
				8th	9th	10th	11th	12th	13th	IPS	Warren
Awareness / Exploration / Exposure	Required	100%	General Career Fair	✓	✓	✓	✓			Yes	Yes
			Tech Career Fair		✓	✓				Yes	Yes
	Optional / Advanced	50%	Guest Speakers		✓	✓	✓	✓		Yes	Yes
Preparation / Engagement	Required	100%	Workplace Tour		✓	✓				Yes	No
	Optional / Advanced	50%	Job Shadow			✓	✓			No	No
			Challenges / Competitions			✓	✓	✓		Yes	Yes
Training / Experience	Students expected to take part in one of four of these advanced opportunities	50%	Catapult		✓	✓	✓			Yes	Yes
		25%	Paid Internship				✓	✓		Yes	Yes
		20%	Youth Apprenticeship				✓	✓	✓	Yes	No
		5%	Adult Apprenticeship						✓	No	No

Wrap Around Services + Transition Support

- Persistence coaches provide continuity and support throughout the 3-year program across secondary, postsecondary, and work-based experiences
- Examples:



EmployIndy: Youth
Apprenticeship Managers



Ivy Tech: Pathways Coaches



EmployIndy: Student
Success Coaches

