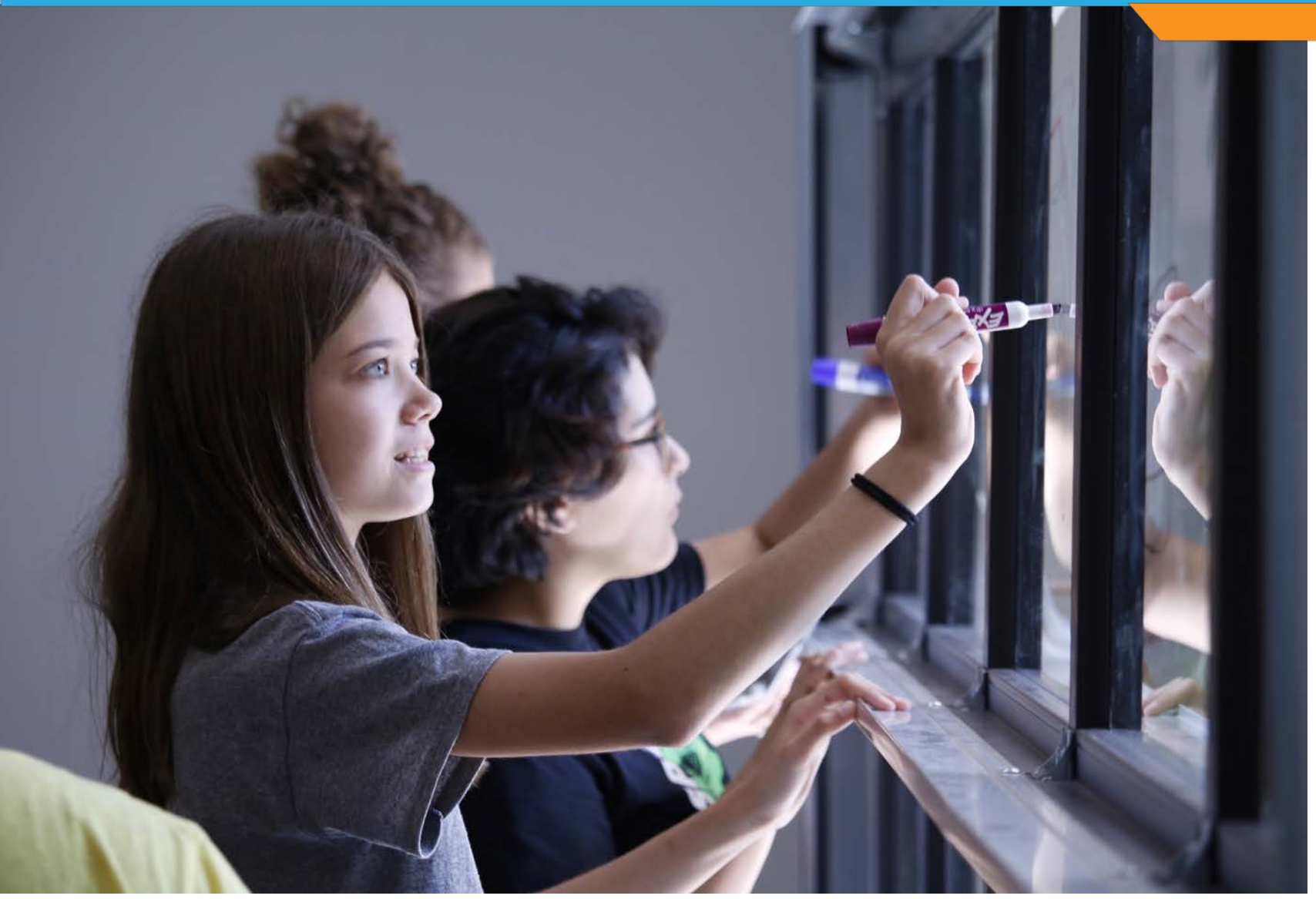
Transforming Learning



Middle and Early College Models

Annalies Corbin, PhD
Presidet & CEO

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STREAM STEAM SEQAL
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DESIGN THINKING

STREAM STEAM SEQAL
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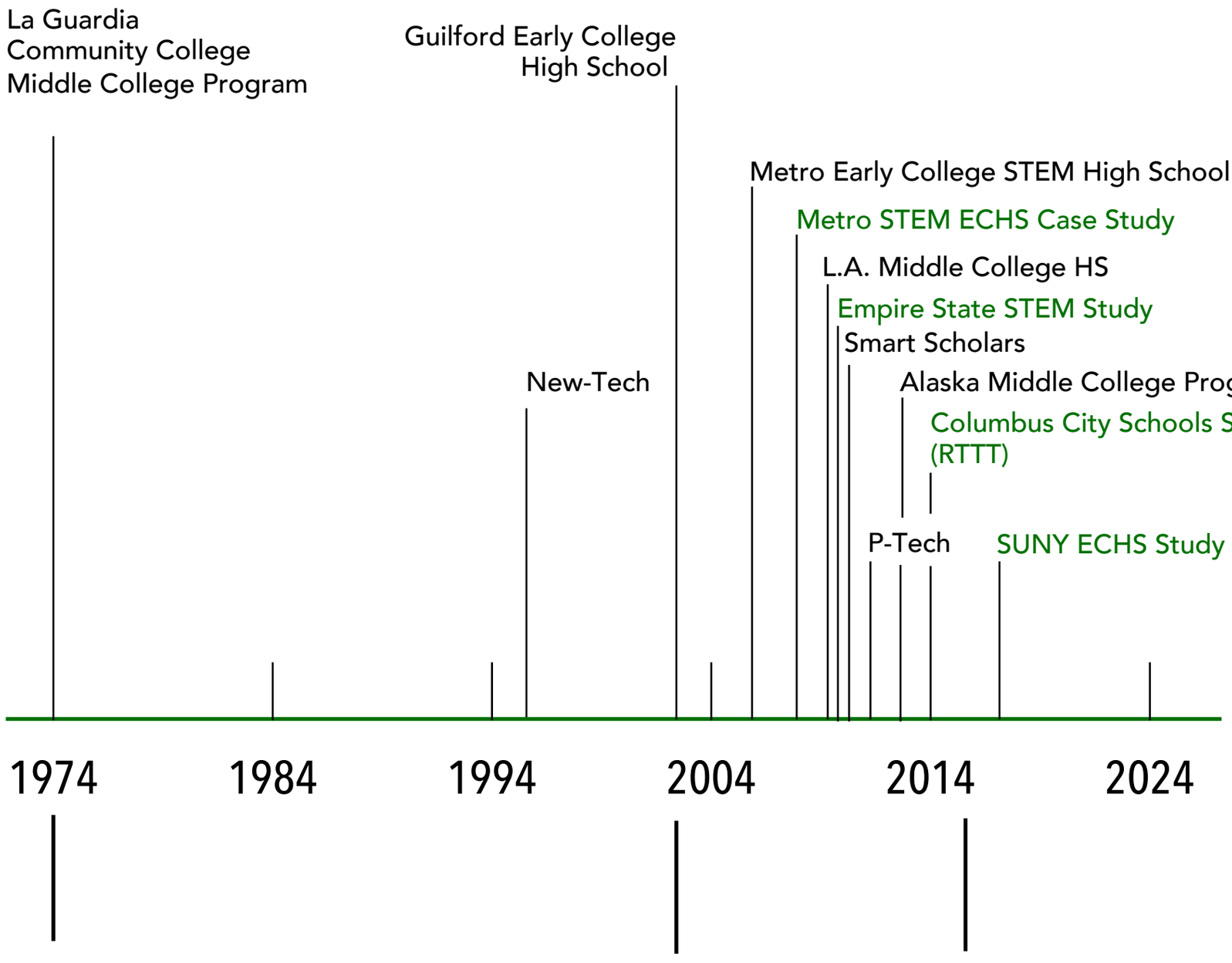
Development of Middle - Early College Programs



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Access to Post Secondary - What Does it Really Mean?

Model: Middle College Schools

1974 Launch

- High Schools grade 11-13 and also enrolled part time in classes at a partner post secondary institution;
- Secondary schools, authorized to grant diplomas in their own name;
- Located on college campuses across the nation;
- Small student populations focusing on historically underserved and underrepresented in college;
- No cost college access working towards earning an Associates degree.

Model: Early College Schools

2002 Launch

- Compressed high schools grades 9-12 with integrated high school and collegiate curricula;
- Located on or near college campuses across the nation;
- Small student populations focusing on historically underserved and underrepresented in college;
- No cost college access - dual enrollment
- Stepped increases in the percent of graduates earning college credits, earning more than one year's worth of college credits, and earning an Associate's degree or two years of college.

Meshing of Ideology

Intensive Counseling

Courses – dual credit progresses to dual enrollment

Audience – At Risk Youth

Target Grades – 11-13

Community College partner

Near or Embedded on college campus

Middle College

Career Technical Education

Early College

Location – anywhere

Any Post Secondary partner

Target Grades – 9-12

Audience – Top 20 - 30 percentile

Courses – dual enrollment

Workforce Internships

Vocational Tech

High Tech High

BOCES

New Tech

Middle-Early College

Smart Scholars

Smart Scholars/P-Tech

Smart Transfer

High Tech High

STEM Summer Institutes

New Tech

P-Tech

STEM Academies

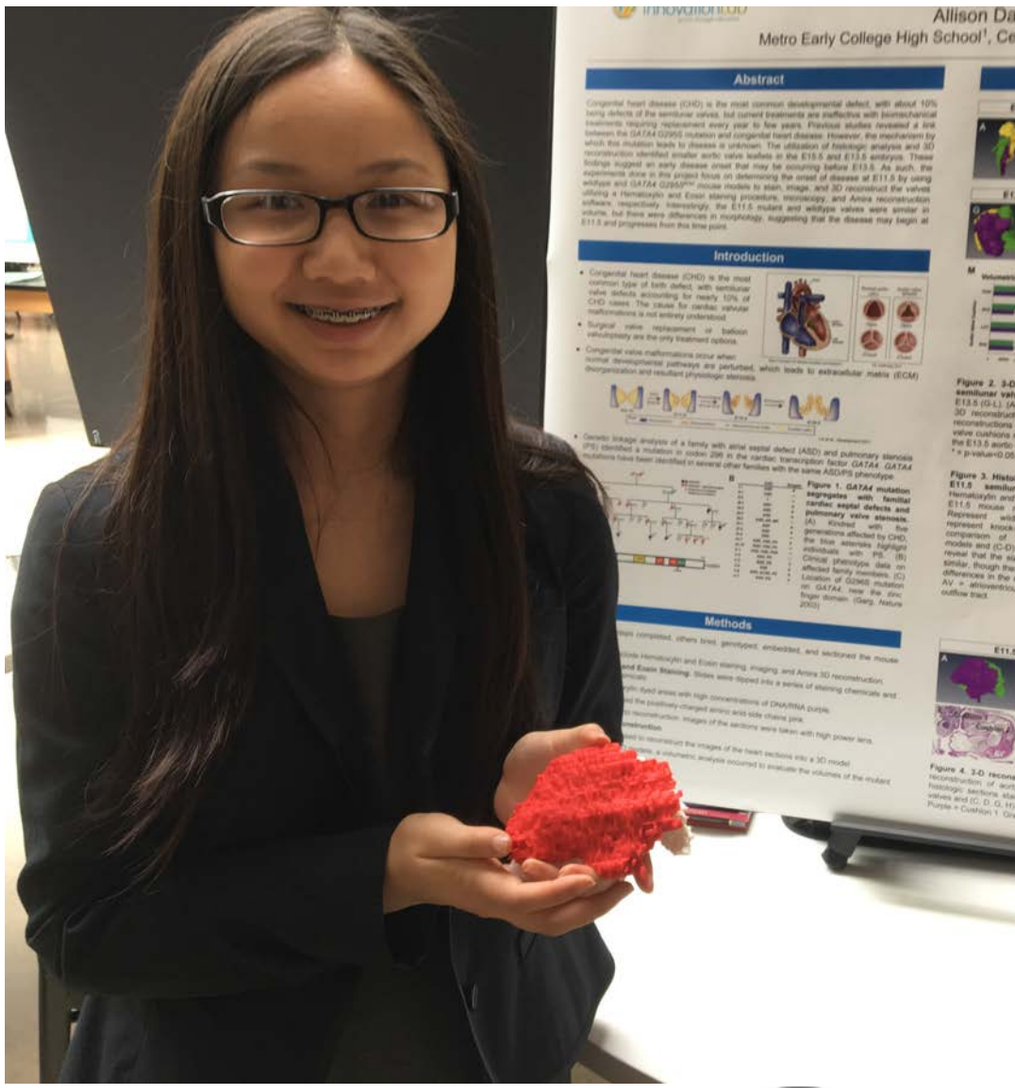
STEM Learning Labs

Model: New Technologies High Schools (New Tech) 1996

Aspiration: Career Readiness

Emphasis on Components:

- No-cost/reduced-cost early college
- Whole school program design
- Project based learning
- Workplace experience
- Local business and STEM industry regional partnerships
- Community engagement/partnership for civic readiness
- Dual-credit/dual enrollment with higher education partner



New Tech Schools

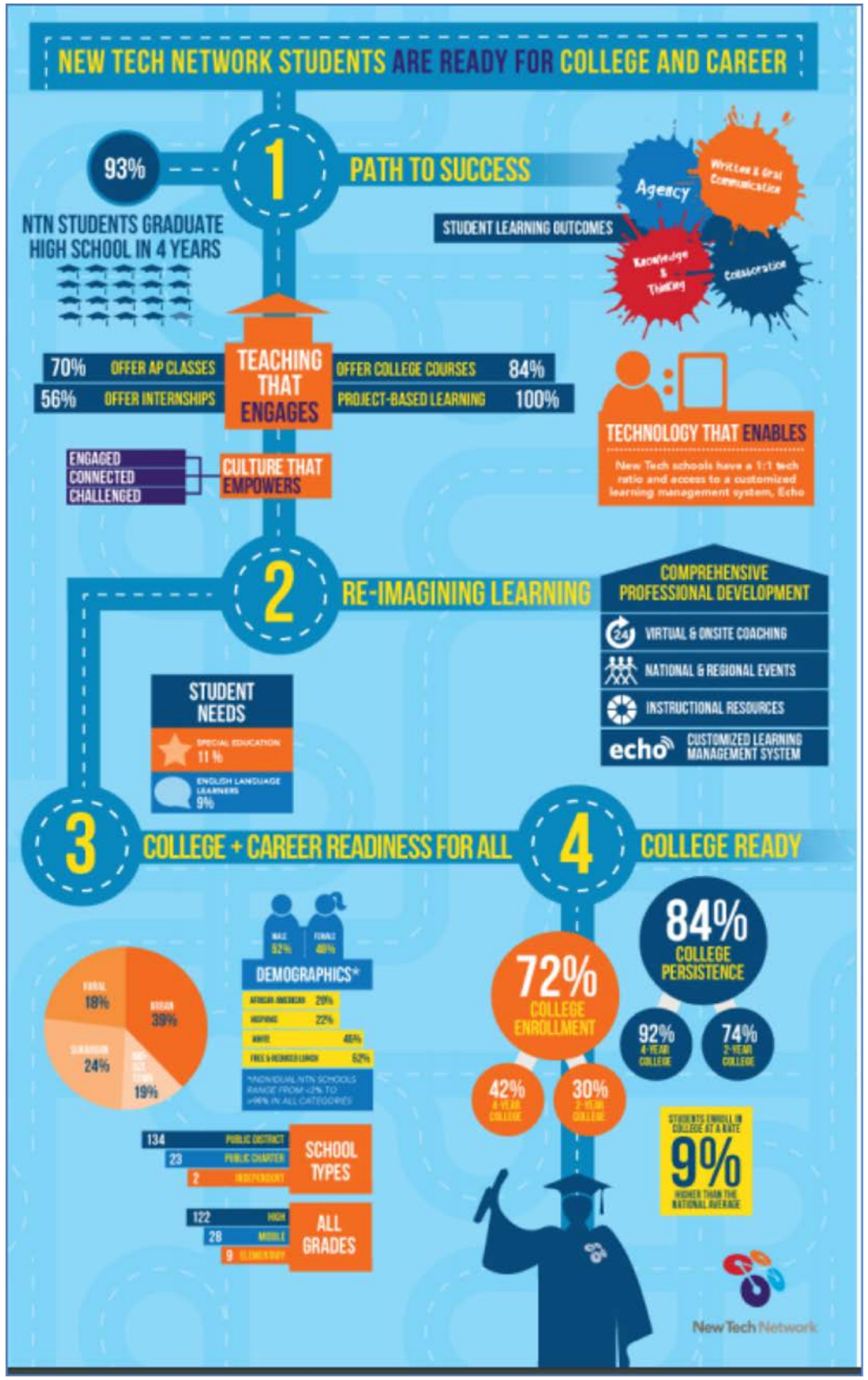
Goal:

- Workforce development for local business and regionally aligned STEM industries

Program Attributes:

- Career infused curriculum development;
- Work-based instructional strategies;
- STEM focused immersive delivery
- Moving down to middle and elementary levels

New Tech Schools



Model: Metro Early College Middle & High School 2005

Aspiration: College and Career Readiness

Emphasis on Components:

- No-cost 6-12 early college
- Whole school program design
- Project based learning, progressing to problem based in the Labs
- Workplace internship
- Local business and STEM industry regional partnerships
- Community engagement/partnership for civic readiness
- Dual enrollment with higher education partners

Metro Schools

Goal:

- College attainment aligned to Workforce development

Program Attributes:

- College infused curriculum development;
- Workforce Learning Centers experience
- Capstone research
- STEM focused immersive delivery
- Original STEM Platform Demonstration school that led to HB119 - Ohio Legislates STEM Schools

Original Metro Learning Centers

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PD | P³ | KC | BP

Professional Development | P3: Problems, Projects, Products | Knowledge Capture | Bridge Programs

bodies
EXAMINE | HEAL
Learning Lab

Students will be available Mondays-Fridays from 8:00 am - 2:30 pm (class periods 1-4), with some flexibility in the Spring semester for an additional college-level course.

These early college experiences are designed for students interested in **studying biology, nursing, biomedical, and/or health science fields**.

Students must have mastery in all **Metro Biology and Chemistry** classes and be **ready for college-level coursework**.

In addition to taking OSU Biology coursework, students will participate in **hands-on research, anatomy, wellness, and internships**.

THE OHIO STATE UNIVERSITY
WEXNER MEDICAL CENTER

OSU Biology
Biology 1113 & 1114 (Pre-Pro Track)
Biology 1101 & 1102 (Allied Track)

The Ohio State University Main Campus

metro
EARLY COLLEGE HIGH SCHOOL

Anatomy
Wellness
Internship
Scientific Writing and Research
Capstone Research

Metro Early College High School

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Model: Smart Scholars Early College High Schools 2009

Aspiration: College Readiness

Emphasis with Components:

- No cost 9-12 early college
- Whole school or 'school within a school' program design
- High levels of mentoring, tutoring, and remediation
- Post-secondary partnerships
- Dual-credit courses offered at the high school
- Dual enrollment to expose students to the college environment and the "power of place" to remove barriers to attaining high self-esteem and sense of success

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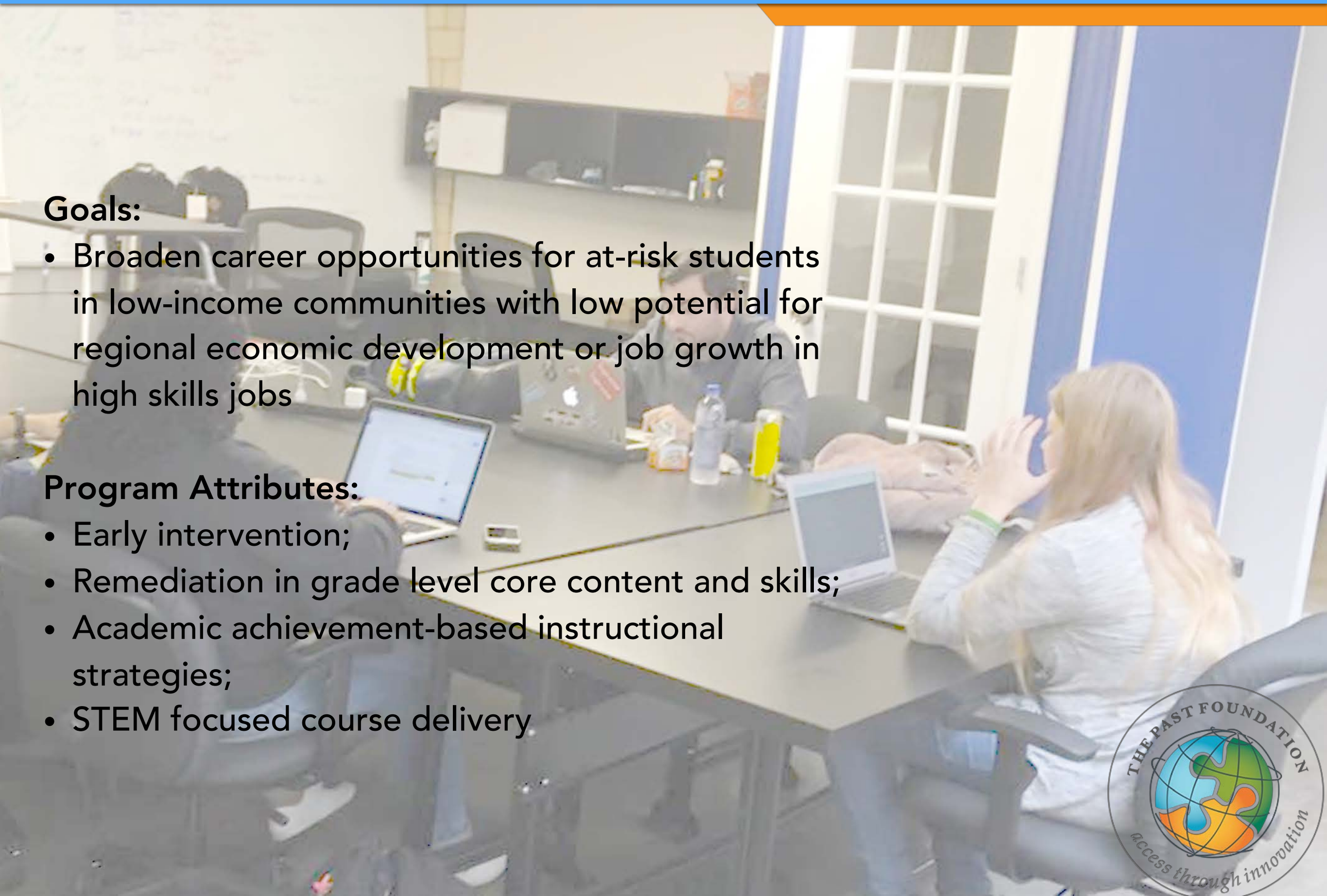
Smart Scholars



Goals:

- Broaden career opportunities for at-risk students in low-income communities with low potential for regional economic development or job growth in high skills jobs

Program Attributes:

- Early intervention;
- Remediation in grade level core content and skills;
- Academic achievement-based instructional strategies;
- STEM focused course delivery

Smart Scholars

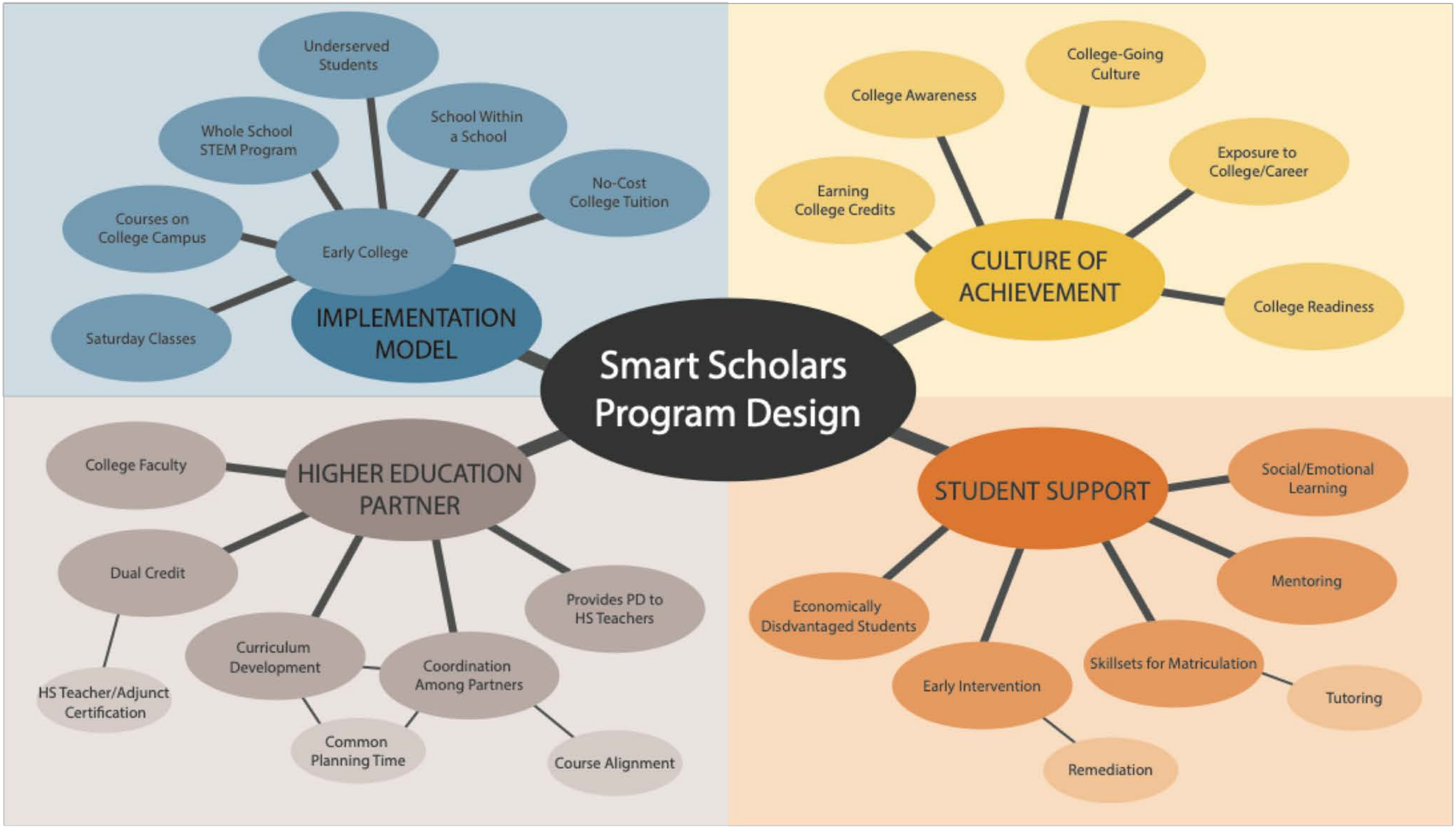


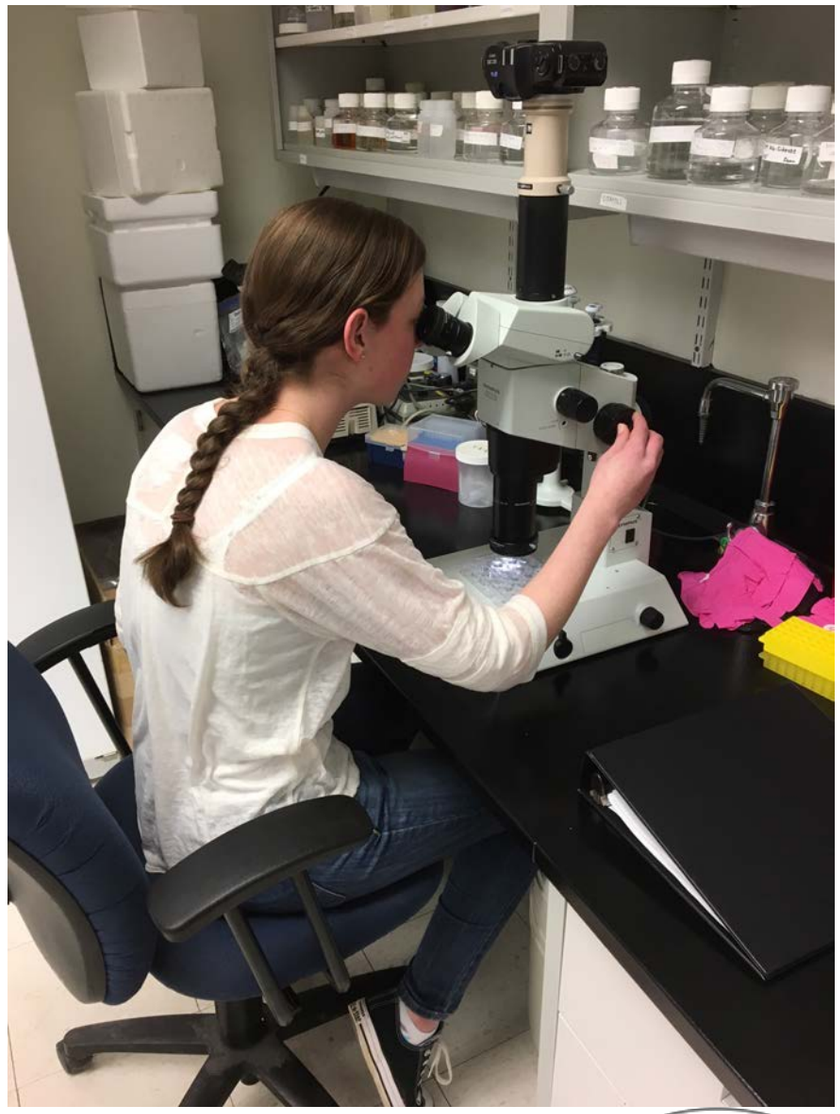
Figure 1: *SMART SCHOLARS PROGRAM DESIGN.* This figure shows four core nodes of the program design: *IMPLEMENTATION MODEL*, *CULTURE OF ACHIEVEMENT*, *STUDENT SUPPORT*, and *HIGHER EDUCATION PARTNER*. The Smart Scholars Program incorporates an early college approach designed to reach underserved, at-risk students building college readiness skills through exposure to college courses and other resources supported by the higher education partnership. In this experience, Smart Scholars students are encouraged to develop expectations to graduate from high school having earned college credits, and understand the value of post-secondary education and increased potential for high skills jobs and careers.

Model: Pathways in Technology Early College High Schools (P-Tech) 2013

Aspiration: Career Readiness

Emphasis on Components:

- No cost 9-14 early college
- Whole school or 'school within a school' program design
- Problem based learning
- Workplace experience
- Post-secondary partnerships
- STEM industry regional partnerships
- STEM professionals as mentors and role models
- Dual enrollment to advance seamless transition from high school to post-secondary in a six-year time frame (grades 9-14)
- Award of A.A./A.A.S. or other career specific industry certifications



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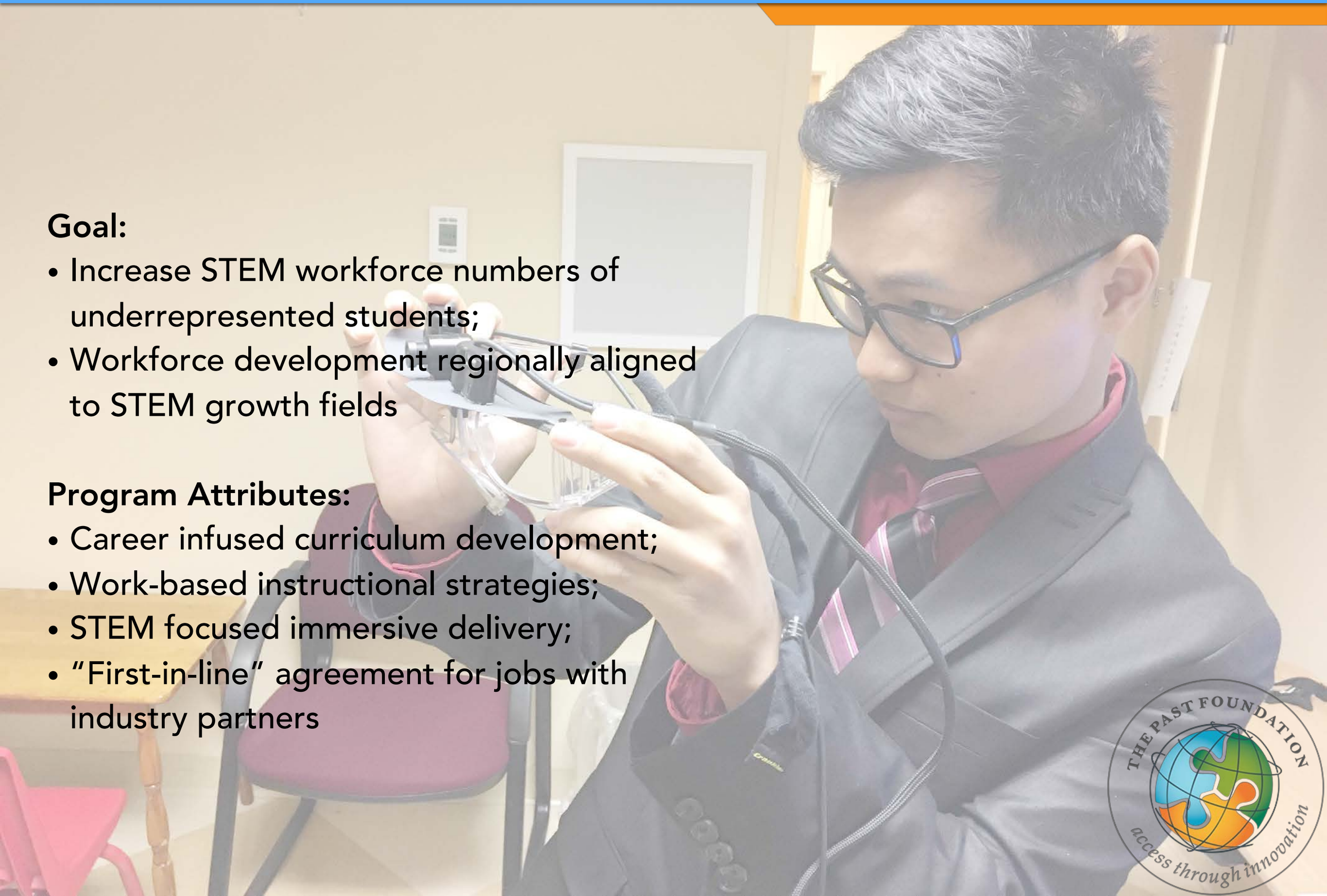
P-Tech Schools



Goal:

- Increase STEM workforce numbers of underrepresented students;
- Workforce development regionally aligned to STEM growth fields

Program Attributes:

- Career infused curriculum development;
- Work-based instructional strategies;
- STEM focused immersive delivery;
- “First-in-line” agreement for jobs with industry partners

P-Tech Schools

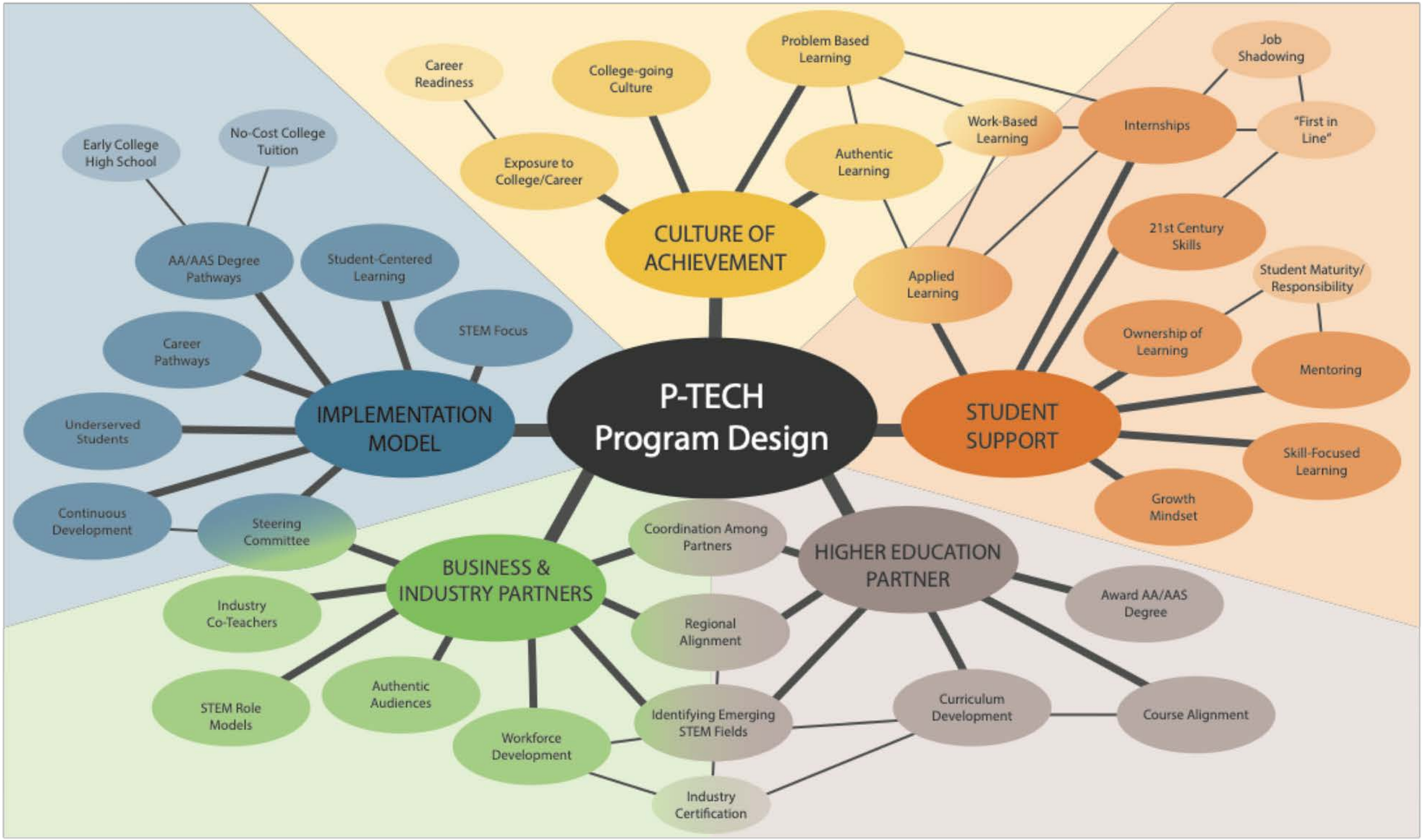


Figure 3: *P-TECH PROGRAM DESIGN*. This figure show five core nodes of the program design: *IMPLEMENTATION MODEL*, *CULTURE OF ACHIEVEMENT*, *STUDENT SUPPORT*, and two *PARTNERS* (*HIGHER EDUCATION* and *BUSINESS & INDUSTRY*). The P-TECH Program reflects an early college approach designed to reach underserved students, blending high school and college in a six-year program culminating in an AA/AAS degree. *CULTURE OF ACHIEVEMENT* is aligned to STEM career pathways and work-based learning that exposes students to authentic problem solving, collaborative work with STEM professionals, gaining a growth mindset, STEM skills, and exposure to potential employers. The role of *HIGHER EDUCATION* and *BUSINESS & INDUSTRY* are coordinated through a P-TECH Steering Committee that provides the forum for identifying priorities for workforce development, curriculum development and alignment.

PAST Innovation Lab

PAST Innovation Lab

Industry

Post Secondary

K-12

Community

Innovation

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PAST Innovation Lab
An Education R & D Prototyping Facility

Aspiration: Advanced Workforce Development

Emphasis on Components:

- Robust partnerships with post secondary
- Whole school program design and professional development
- Problem based instruction with project based delivery
- Workplace immersion on industry R &D teams
- Embedded business and STEM industry regional partnerships
- Community engagement/partnership for civic readiness
- Evidence based research focus
- Immersive bridge programs design and development
- Ideation and educational modeling

PAST Innovation Lab

Goal:

- Creating a relevant landscape of teaching and learning

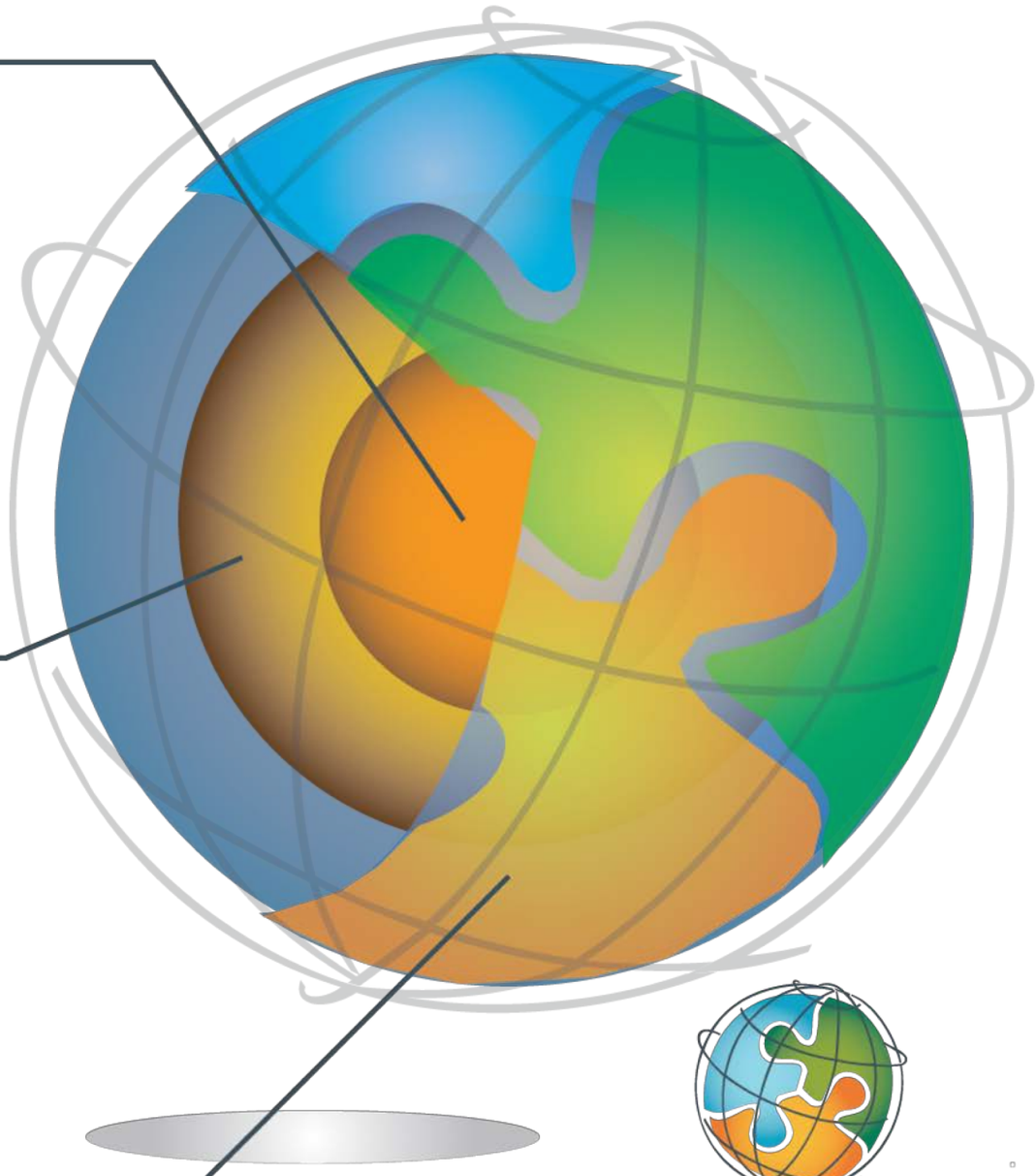
Program Attributes:

- Career infused curriculum ideation;
- Emerging workforce development
- Problem-based instructional strategies;
- STEM focused immersive delivery

PAST Innovation Lab

Why —

We are committed to creating equity and access for all youth in ways only they can envision



How —

We build avenues of access and programs that empower students and teachers to be leaders and equip them with the tools and understanding to accomplish their dreams

What —

We power formal and informal STEM programs with engaging, hands-on learning that create Innovators, Critical Thinkers and Collaborators

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PAST Innovation Lab - Pathways to Workforce

THE PAST FOUNDATION

The Pulse of STEM | The Paths to STEM

middle school | 6-8 (m-series)	high school | 9-10 (s-series)	high school | 11-12 (learning labs)
mach mach	Surge surge	energy energy
maladies maladies	Stiff stiff	bodies bodies
medi@ media	Signals signals	digital digital
missile missile	SpaCE space	explore explore
mud mud	Sprouts sprouts	growth growth
maker maker	Sprockets sprockets	design design

Middle School

ELA / Humanities / Social Studies + Math + Science | + Electives | + PLTW

MON & WED | TUE & THU | FRI

High School

ELA / Humanities / Social Studies + Math + Science | + College Readiness + Career Exploration | + PLTW

MON & WED | TUE & THU | FRI

Proposed Scheduling

CULINARY ARTS SUMMER INSTITUTE
culinary arts

ADDITIVE MANUFACTURING SUMMER INSTITUTE
additive manufacture

PAST Innovation Lab - Summer Institute Series

THE PAST FOUNDATION

growth

metro SCHOOLS

Sprouts Hybrid S-Series (6-weeks Summer)

M	T	W	R	F
English Social Studies Horticulture Permaculture Chemistry Math	**College Readiness** Study Skills	English Social Studies Horticulture Permaculture Chemistry Math	**Career Exploration** Rotations Guest Speakers	CTE Principles of Environmental Sustainability PLTW

Students are encouraged to enter the scaffolded pathway in the Growth Series.

Students who are not ready for College or College Plus can start with the Hybrid S-Series.

From there they can opt to take the complete Growth Learning Lab curriculum or the Culinary Arts Summer Institute.

The Summer Institute can be taken in the summer, and then can be followed by the Growth Learning Lab.

growth metro SCHOOLS (Learning Lab)

Learning Lab Series (Academic Year)

		M	T	W	R	F
Summer Fall	AM	Metro English 1100 Internship	Metro Biology 1111 Horticulture HCS2201 - OSU	Metro English 1100 Internship	Metro Biology 1111 Horticulture HCS2201 - OSU	Intern Lab
	PM	Open for College Elective/Course High School Class	Open as needed	Open for College Elective/Course High School Class	Open for College Elective/Course High School Class	Open for College Elective/Course High School Class
Winter Spring	AM	Metro English 2367 Food Science FDSCTE 2200 - OSU Capstone Seminar	Metro Biology 1127 Internship	Metro English 2367 Food Science FDSCTE 2200 - OSU Capstone Seminar	Metro Biology 1127 Internship	Intern Lab
	PM	Open for College Elective/Course High School Class	@Site Capstone	Open for College Elective/Course High School Class	@Site Capstone	Open for College Elective/Course High School Class

CULINARY ARTS SUMMER INSTITUTE

Summer Institute Series (6-weeks Summer)

	M	T	W	R	F
AM	Sanitation Basics *(for first week)*	Sanitation Basics *(for first week)*	Sanitation Basics *(for first week)*	Sanitation Basics *(for first week)*	Sanitation Basics *(for first week)*
	Fundamentals of Baking	Fundamentals of Baking	Fundamentals of Baking	Fundamentals of Baking	Fundamentals of Baking
	PAST/Metro Learning Lab	PAST/Metro Learning Lab	PAST/Metro Learning Lab	PAST/Metro Learning Lab	PAST/Metro Learning Lab
PM	Farmers Garden	Farmers Garden	Farmers Garden	Farmers Garden	Farmers Garden
	Basic Food Production	Summer Internship	Basic Food Production	Summer Internship	Basic Food Production

PAST Metro · College · College Plus · University Course · High School · Internship · Farmers Garden

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What Will Your Model Look Like?

annalies@pastfoundation.org