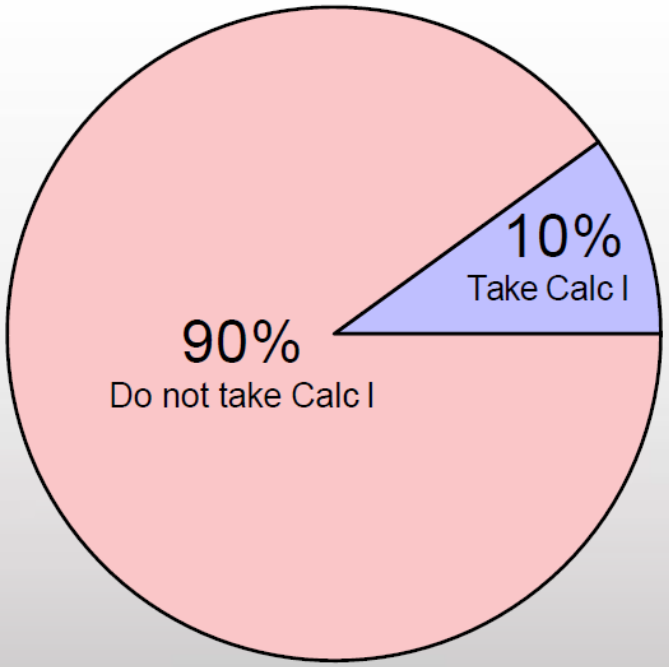
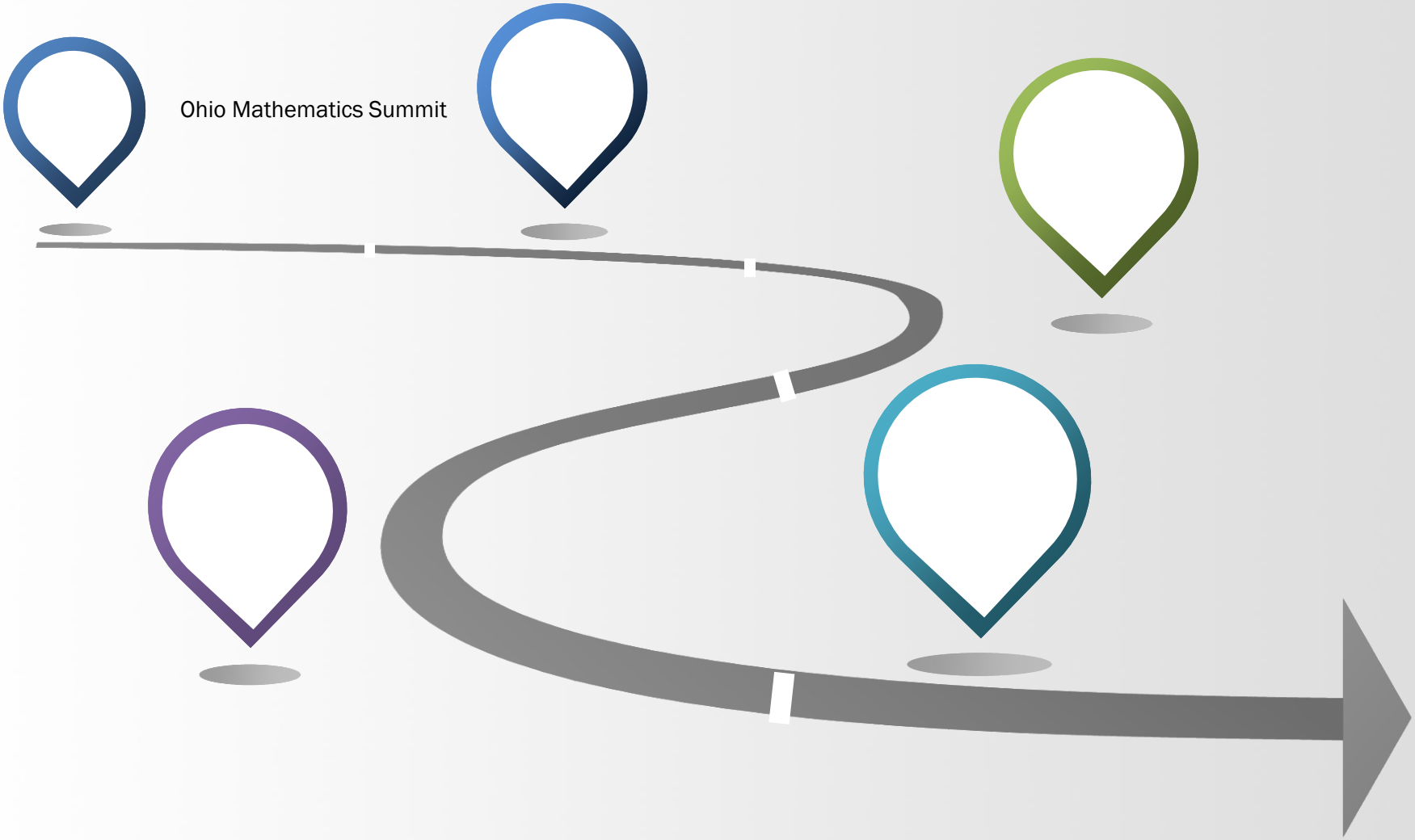
Higher Education Landscape



Students who take College Algebra…

Dunbar, S. 2005. Enrollment flow to and from courses below calculus . In A Fresh State for Collegiate mathematics: Rethinking the Courses below calculus, N.B. Hastings et al. (Eds.). Washington DC: MAA Notes, Mathematical Association of America.

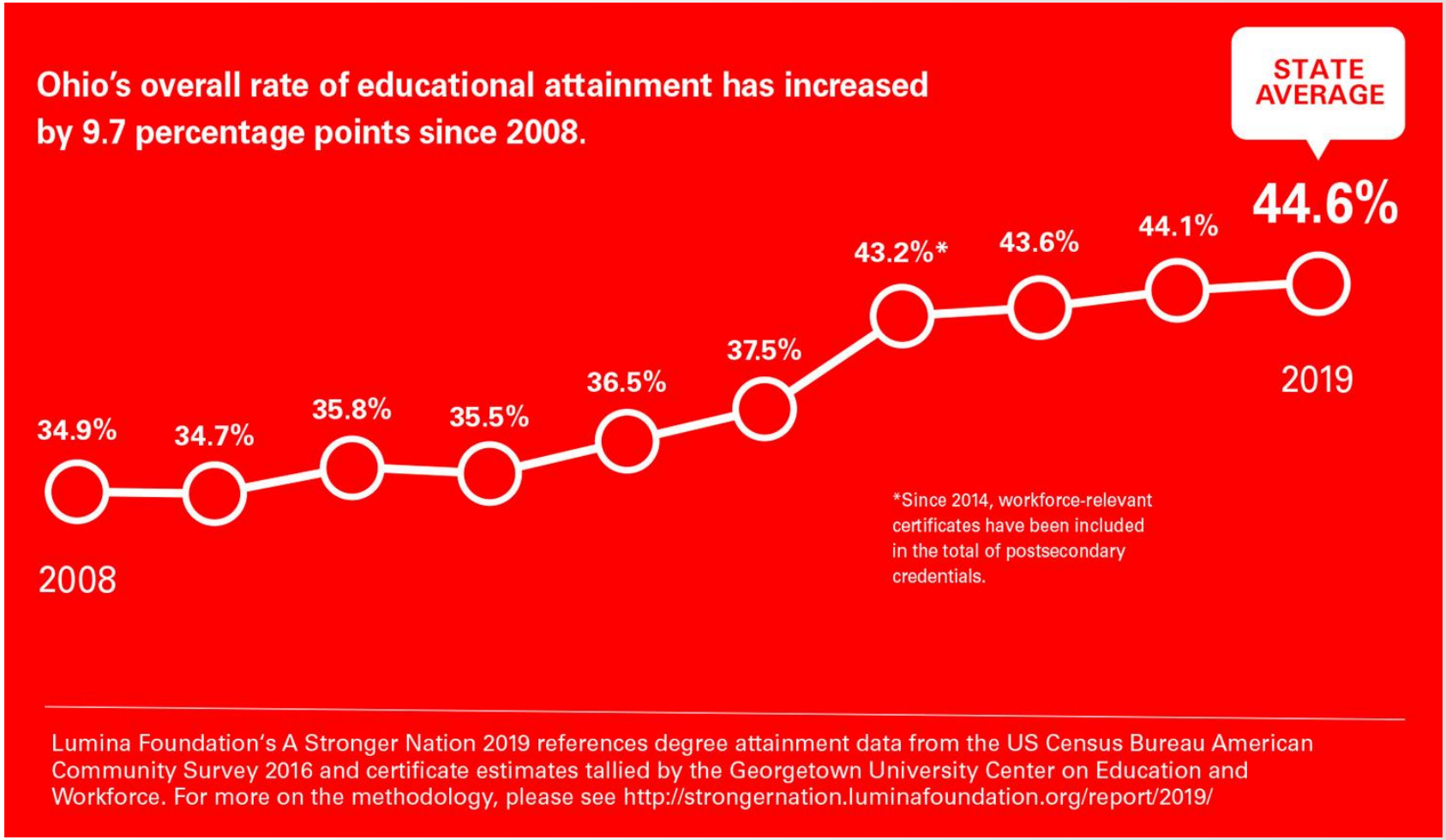

Ohio Mathematics Summit

Mathematics Gateway Course

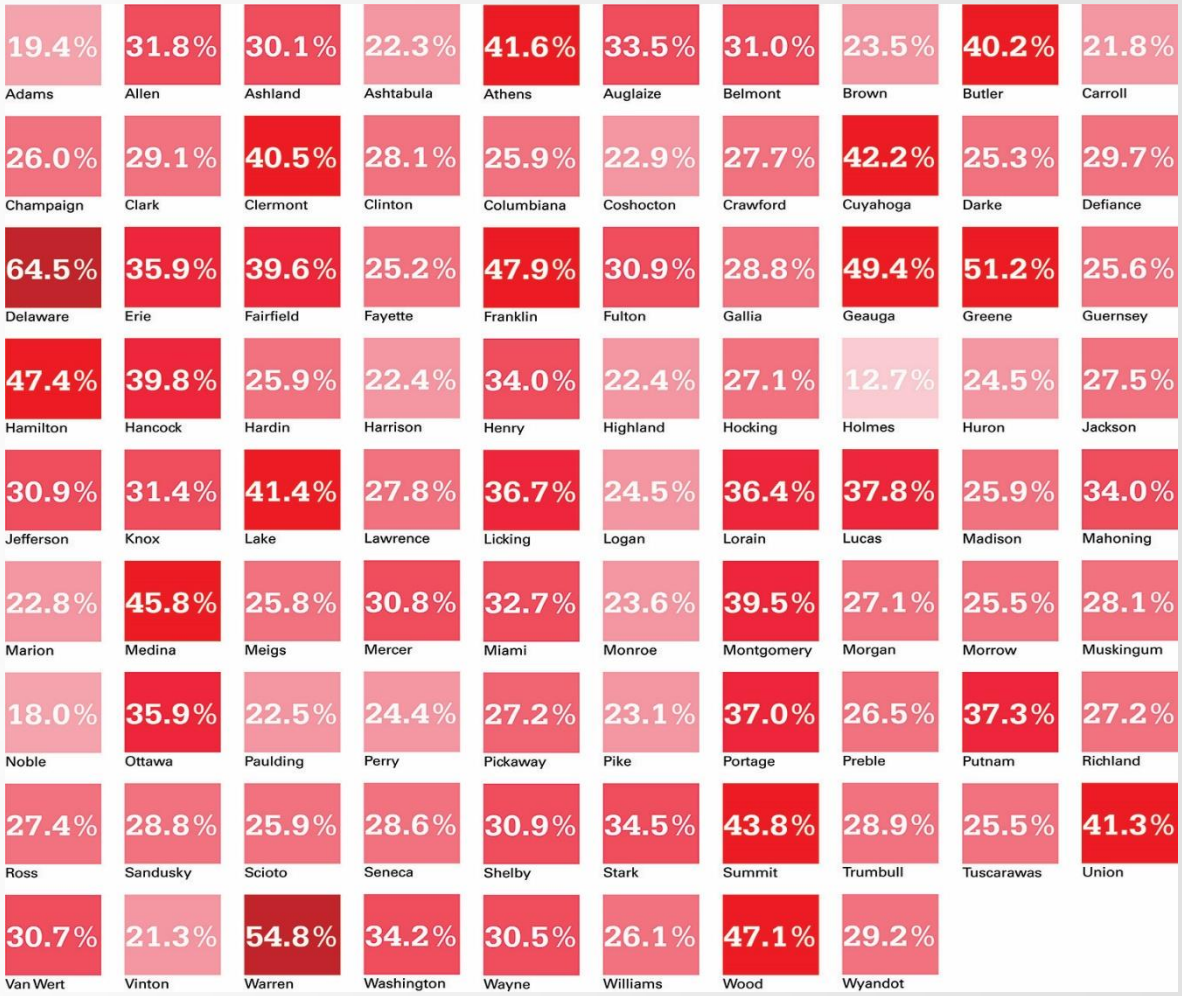
Entry-Level Math Course	Possible Major Alignment
College Algebra to Calculus	•Business •Chemistry •Engineering
Quantitative Reasoning	•Communication •Criminal Justice •Fine Arts
Statistics	•Nursing •Nutrition •Social Work

Increasing Attainment is an Economic Imperative for Ohio

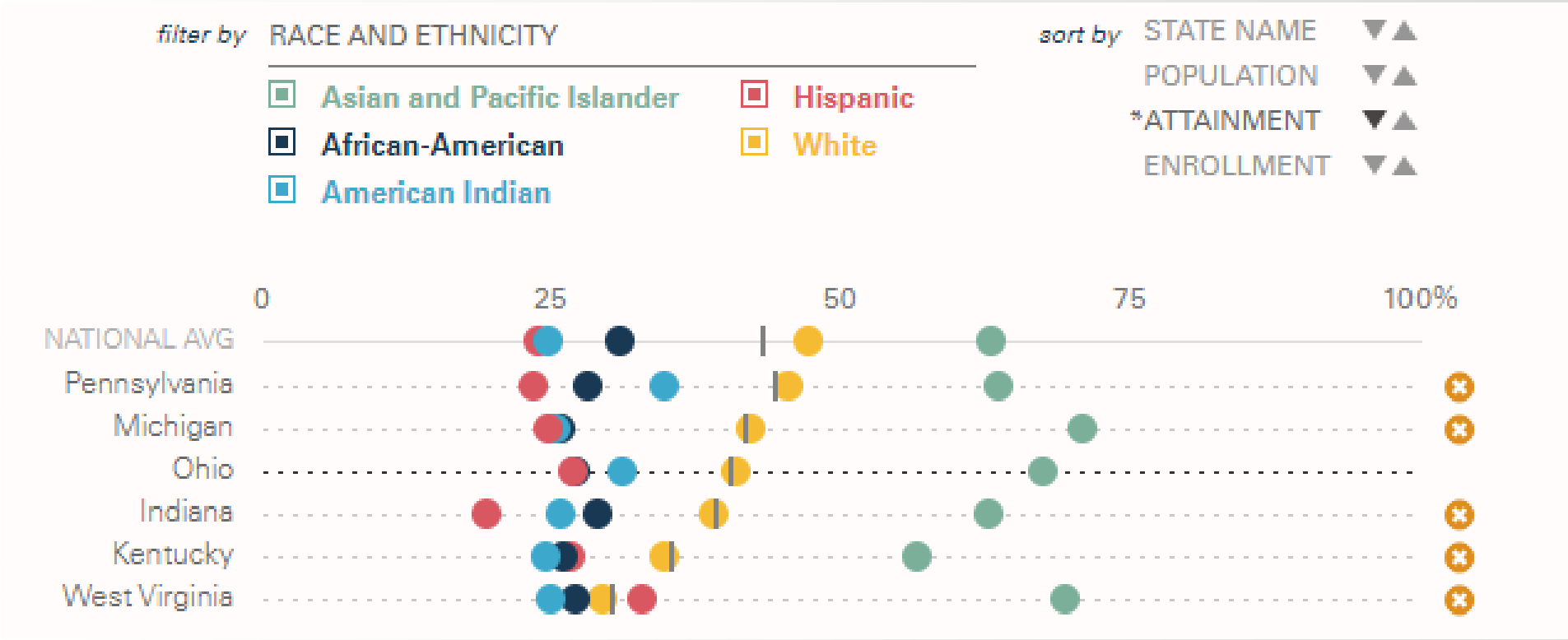
Ohio's Attainment Growth



Geographic Disparities

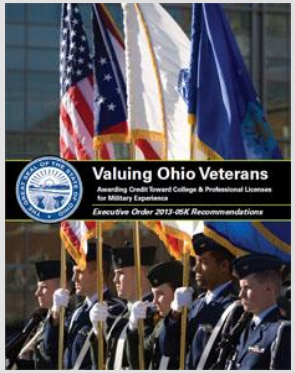


Racial and Ethnic Disparities



Accelerating Progress

Ohio STRONG START TO FINISH
DATA-INFORMED & EQUITY-CENTERED



CollegeCredit PLUS

Ohio Mathematics Initiative
Rethinking mathematics courses, curricula and their relationships with other disciplines

FINISH for YOUR FUTURE

3 to GET READY!!!
Preparing for college is as easy as 1-2-3.

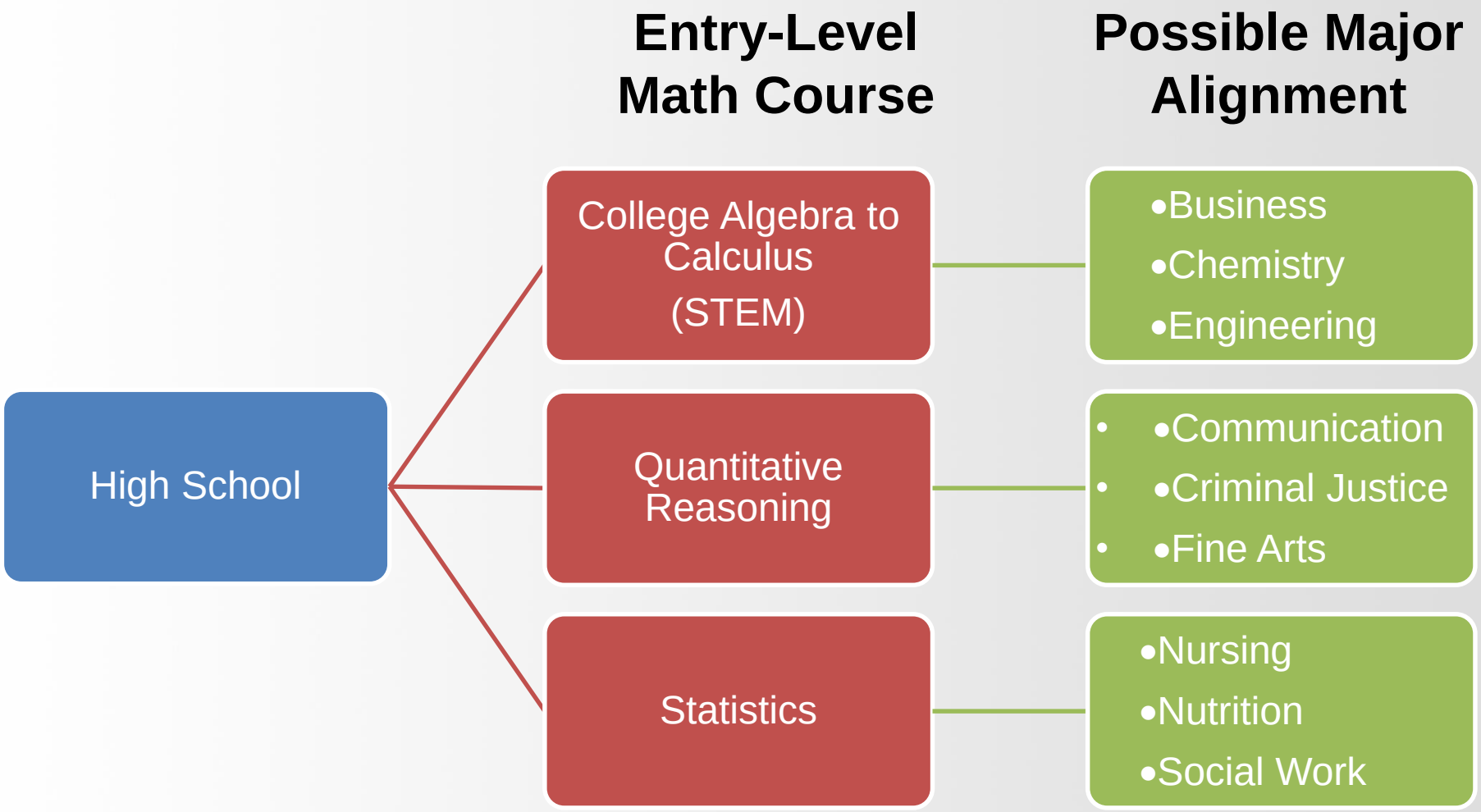
Ohio TRANSFER TO DEGREE guarantee
Guaranteed Transfer Pathways

Choose Ohio First

Ohio | TechCred

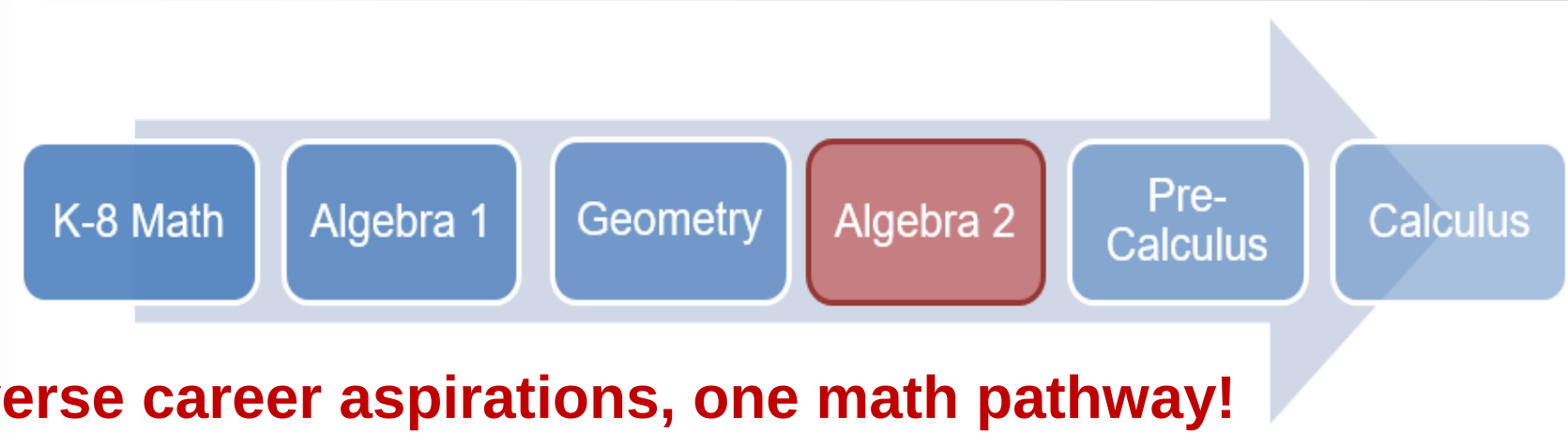
GEAR UP OHIO

Mathematics Pathways



Problem Statement

Ohio has a diverse student body, where each child has unique postsecondary aspirations.



Diverse career aspirations, one math pathway!

Algebra 2 Law

Students must earn 4 credits of mathematics

Mathematics units must include one unit of Algebra 2 or the equivalent of Algebra 2.

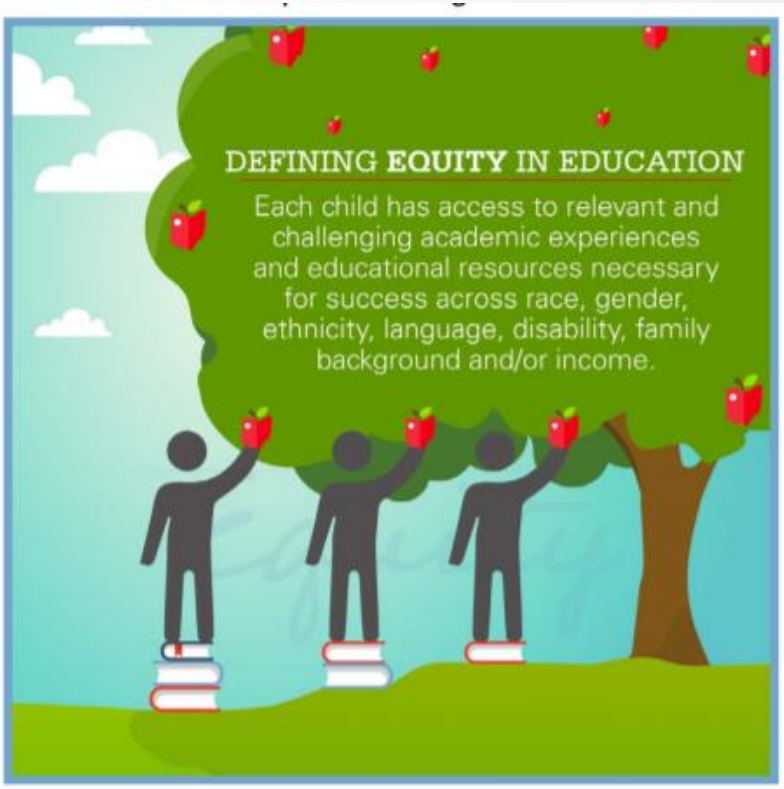
Algebra 2 Law

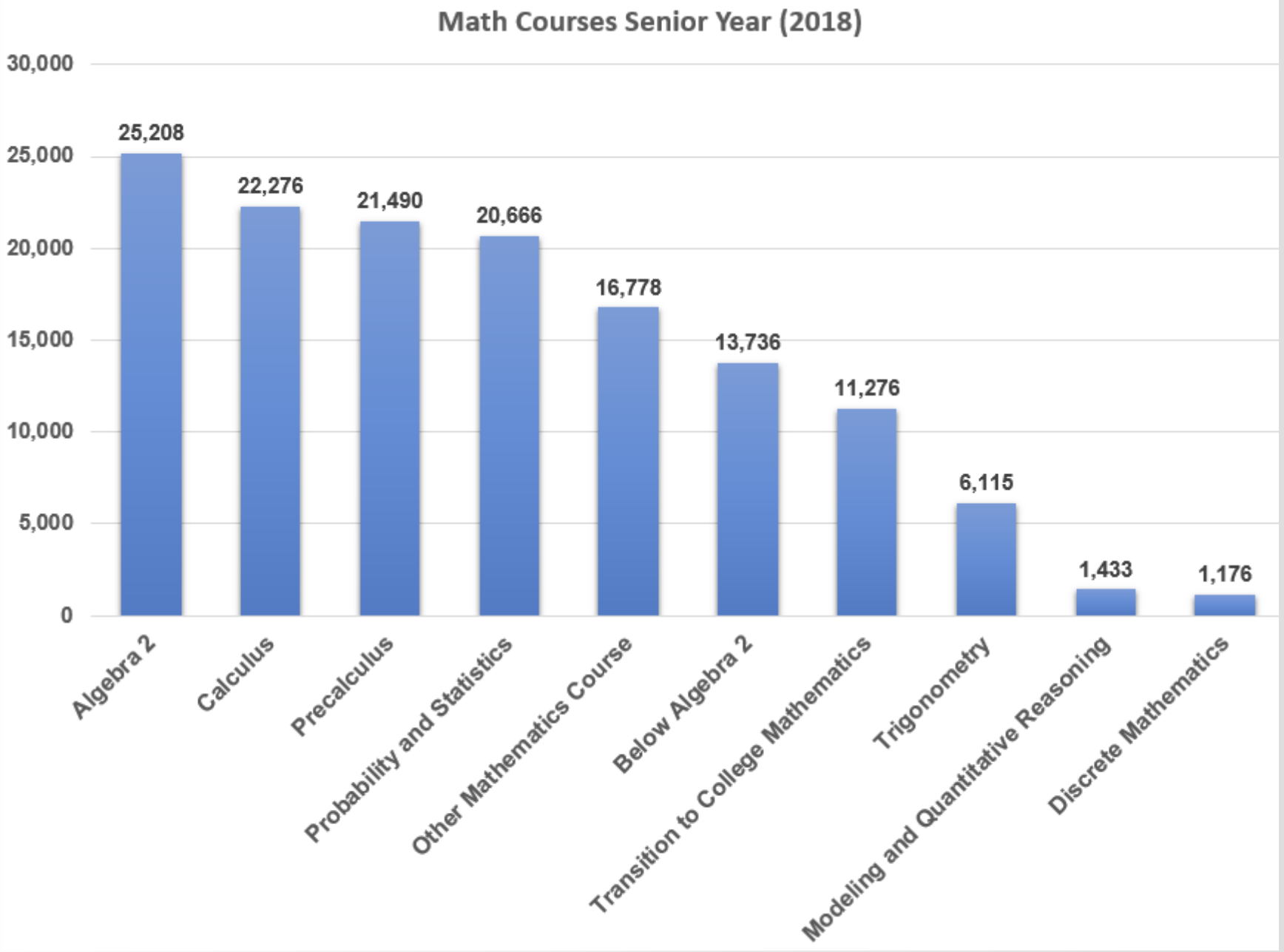
Exceptions

- Algebra 2 is not a requirement for students following a **career technical pathway**.
- A student may choose to apply one unit of **Advanced Computer Science** to satisfy one unit of Algebra 2/Math 3 or equivalent.
- Districts also may use credit in a computer science course approved by the Department to satisfy a student's mathematics credit.

Algebra 2

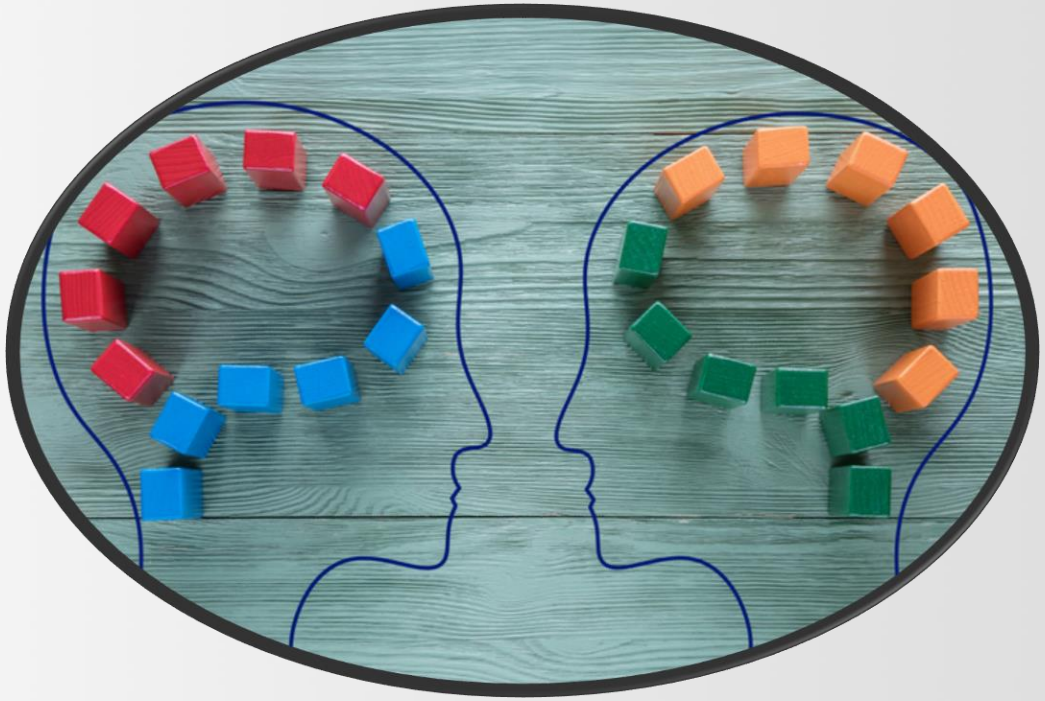
Equity VS. Roadblock




Math Courses Senior Year (2018)
30,000
25,000
20,000
15,000
10,000
5,000
0
25,208
22,276
21,490
20,666
16,778
13,736
11,276
6,115
1,433
1,176
Algebra 2
Calculus
Precalculus
Probability and Statistics
Other Mathematics Course
Below Algebra 2
Transition to College Mathematics
Trigonometry
Modeling and Quantitative Reasoning
Discrete Mathematics

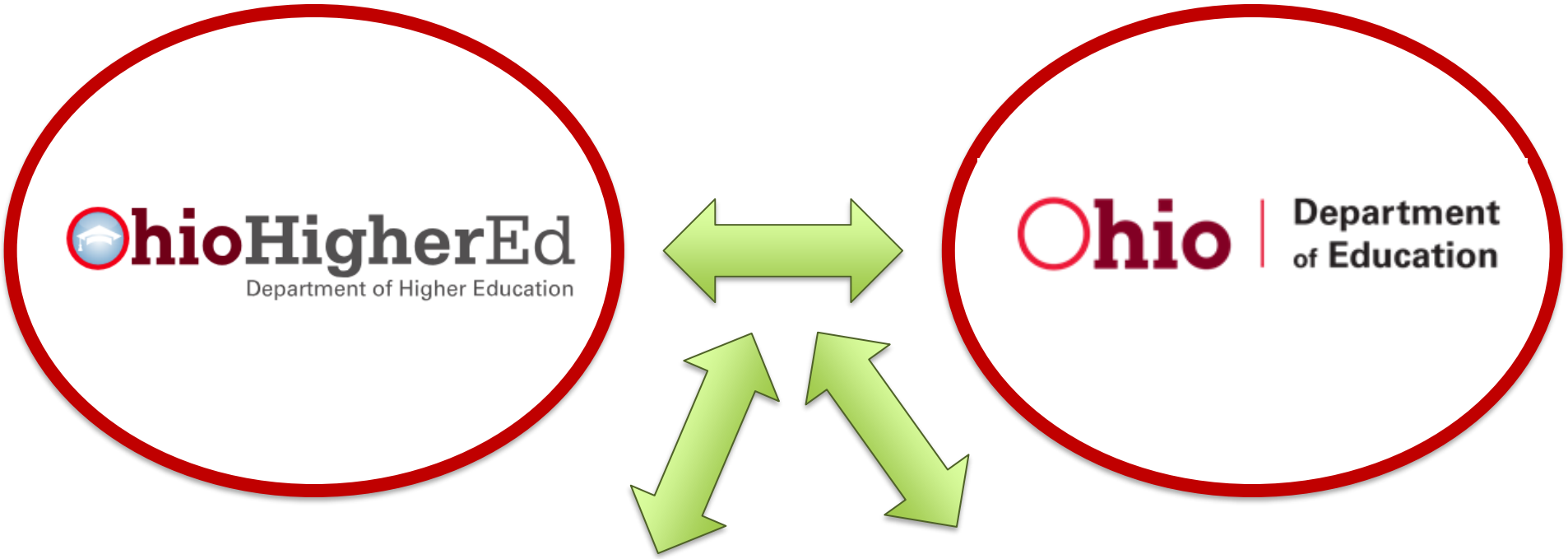
Opportunity: Equivalence

Equivalent thinking but **NOT** equivalent content



Partnership

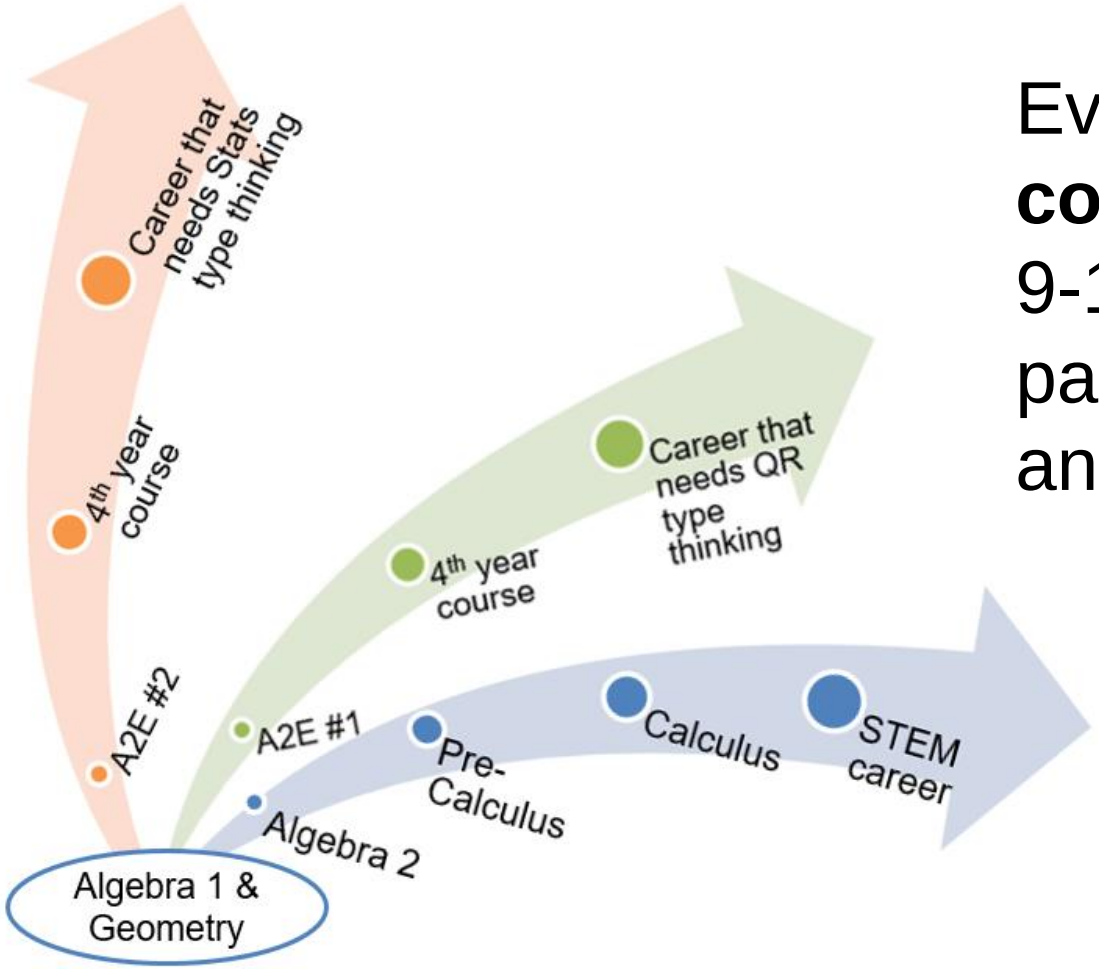
Partnership



ESG Education Strategy Group
ACHIEVING GREATER IMPACT

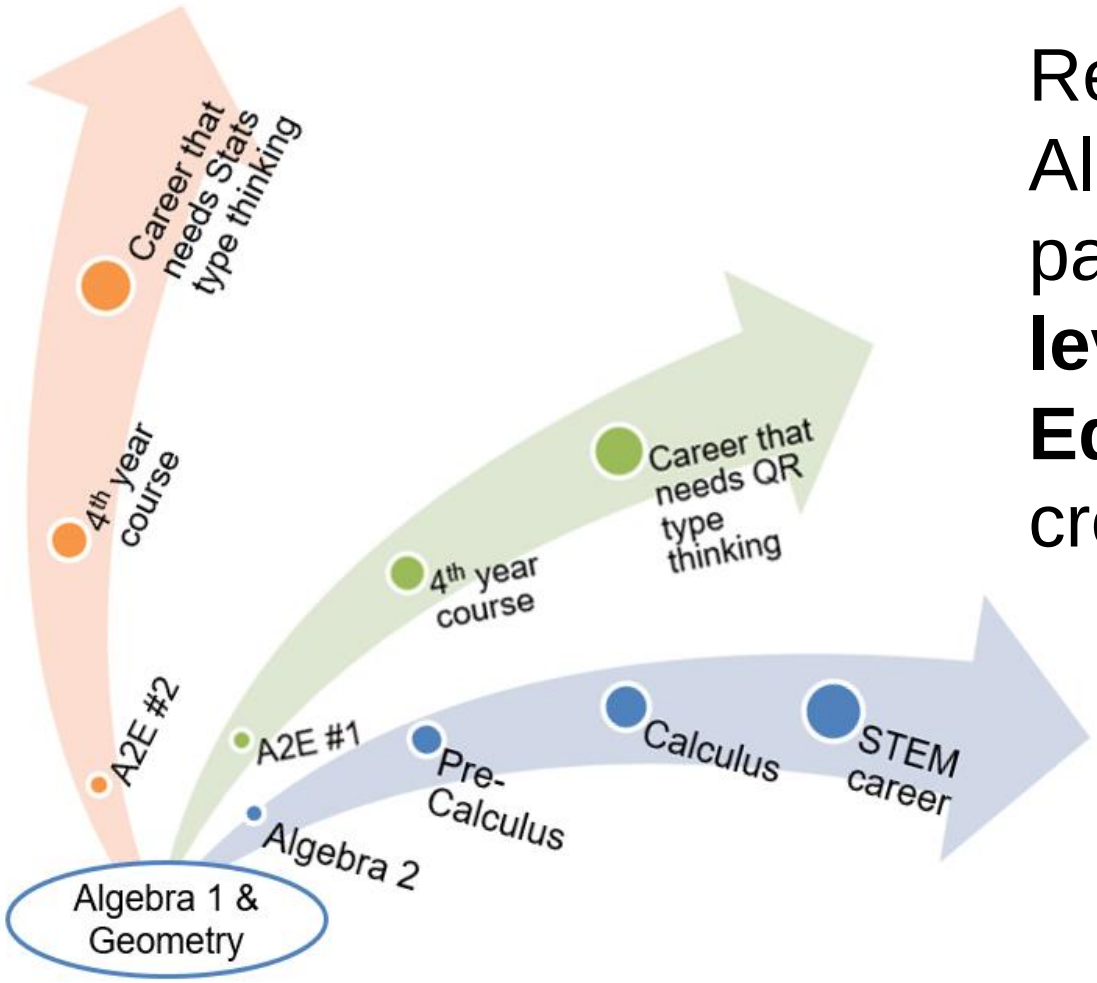
The University of Texas at Austin
Charles A. Dana Center

How?



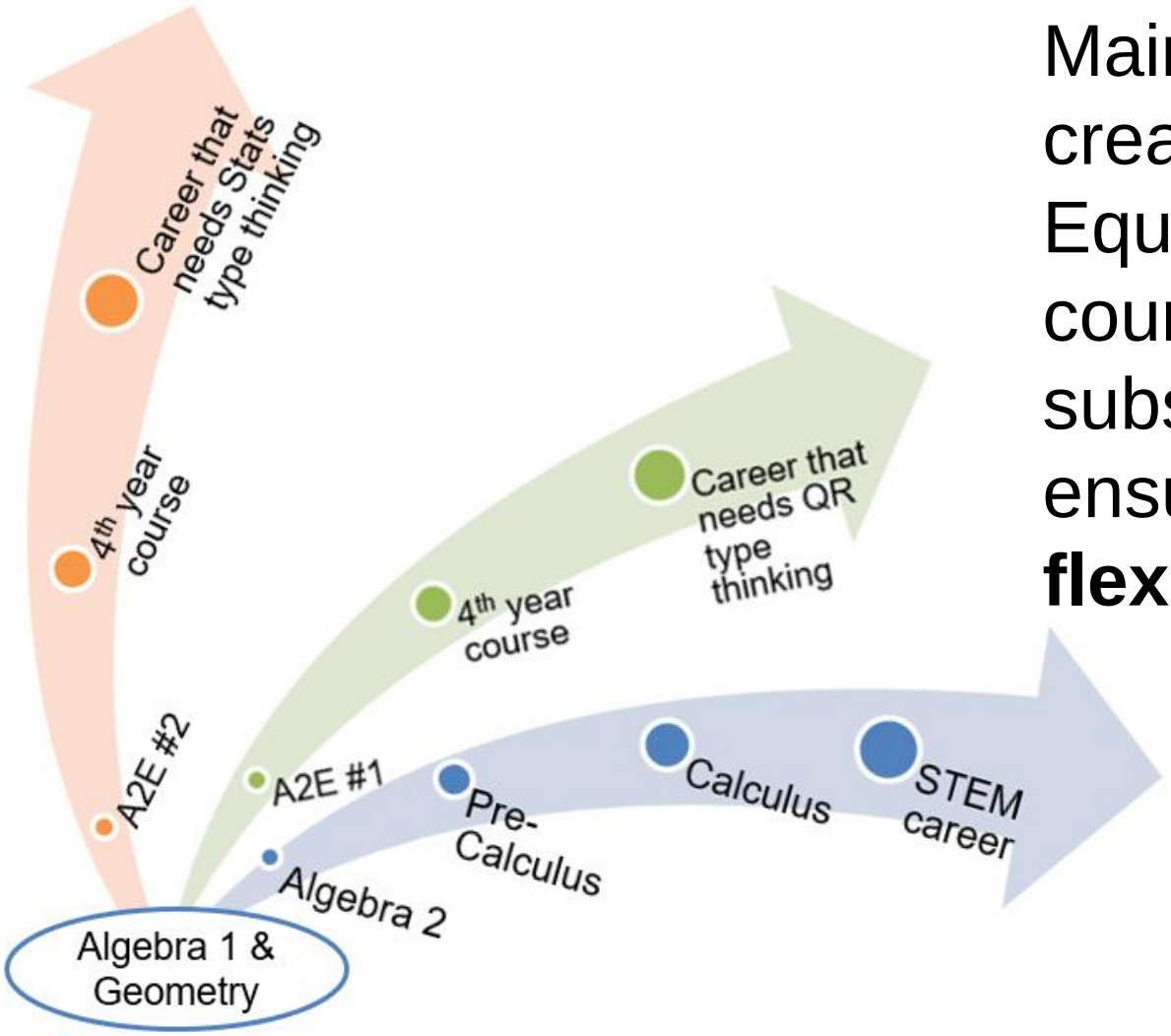
Evaluate the **coherence** between 9-14 mathematics pathways in college and career

How?



Rethink the current Algebra 2 to STEM pathway by **leveraging Algebra 2 Equivalency** (A2E) to create new pathways

How?



Maintain **rigor** in the creation of Algebra 2 Equivalency (A2E) courses and any subsequent courses ensuring **equity** and **flexibility**

Equivalence of thinking

MATHEMATICAL PRACTICES

1. Make sense of problems and persevere in solving them.
2. Reason abstractly and quantitatively.
3. Construct viable arguments and critique the reasoning of others.
4. Model with mathematics.
5. Use appropriate tools strategically.
6. Attend to precision.
7. Look for and make use of structure.
8. Look for and express regularity in repeated reasoning.

Goal

To prepare students for future success