

2023 State of Computer Science Education

The rapid pace of technological advancement, as seen with the widespread integration of generative artificial intelligence (AI), underscores the need for foundational knowledge in computer science for all students. This report calls upon advocates to embrace the urgency of this matter and revamp school curricula to align with the demands of the 21st century, including requiring that all students learn computer science.

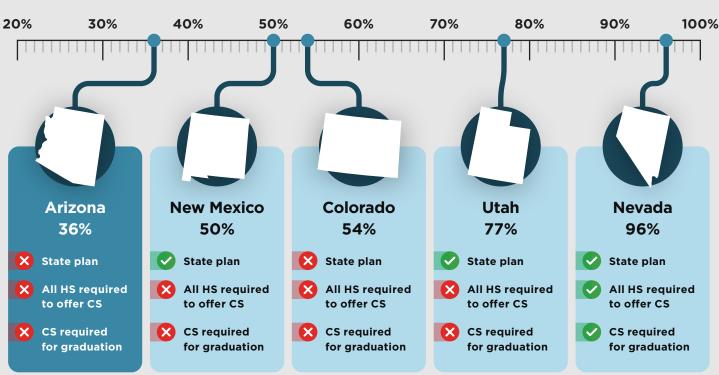
Currently, 57.5% of public high schools in the United States (U.S.) offer a foundational computer science class—an achievement marking the largest percentage growth in the last five years. Across the 35 states* where data is available, 5.8% of high school students are enrolled in foundational computer science. Even with growing access this growth, large disparities still exist, and we must continue to focus on eliminating participation gaps.

9,265
In 2023, AZ averaged
9,265 open computing jobs
each month

\$104,653
These jobs have an average
salary of \$104,653

*AL, AR, AZ, CT, FL, GA, HI, IA, ID, IL, IN, KS, KY, LA, MA, MD, MS, NC, ND, NE, NJ, NM, NV, NY, OK, OR, PA, RI, TN, TX, UT, VA, VT, WV, WI

Comparative Access to Computer Science Courses (percentage of high schools offering)





Ten Policies to Make Computer Science Foundational

1.

Create a **statewide plan** for K-12 computer science

2.

Define computer science and establish standards for K-12 computer science

3.

Allocate funding for rigorous computer science teacher professional learning 4.

Implement clear certification pathways for computer science teachers at elementary and secondary levels

5.

Create university programs to encourage all preservice teachers to gain exposure to computer science

6

Establish **dedicated computer science** positions in a state education agency

7.

schools offer computer science with appropriate implementation timelines

Require that all

8.

Allow computer science to count toward a core graduation requirement

9.

Allow computer science to satisfy an admission requirement at higher education institutions

10.

Require that all students take computer science to earn a high school diploma

What Has Arizona Done to Advance Computer Science Education?

Arizona has funded computer science education annually since 2017, totaling over \$6M after the 2023 legislative session.

Arizona has a full-time Computer Science specialist in the Department of Education as mandated by state legislation passed in 2021.

How Can Arizona Increase Opportunities for Students?

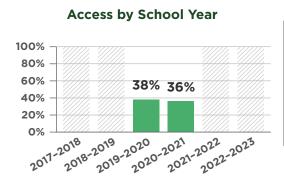
Arizona should publish a state plan on computer science education.

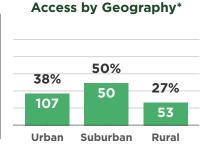
Arizona should require all high schools to offer at least one computer science course.

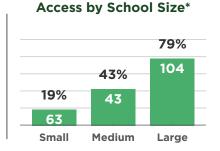
Arizona should prioritize publishing computer science course offerings and enrollment.



Percentage of Public High Schools Offering Foundational Computer Science

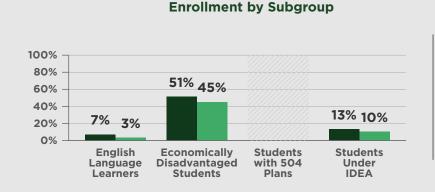


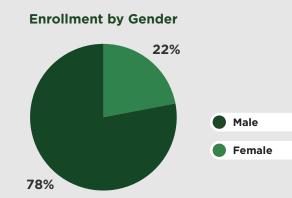




*Data is from the most recent data school year 2020-2021

Participation in Foundational High School Computer Science by Student Demographics



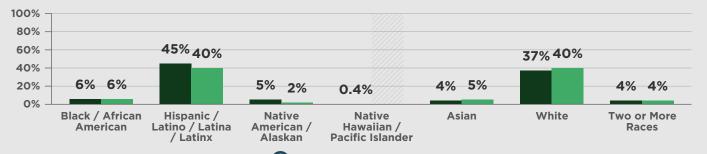


Student Demographics 9-12

Participation in Foundational Courses

2.0% of high school students took foundational computer science in 2020–2021

Enrollment by Race / Ethnicity



Native American students are 1.5 times less likely to take foundational computer science than their white and Asian peers

Student Demographics 9-12

Participation in Foundational Courses

UNITED STATES

Percentage of Public High Schools Offering Foundational Computer Science Nationally

