

# Support K-12 Computer Science Education in Florida

Computer science drives job growth and innovation throughout our economy and society. Computing occupations are the **number 1 source of all new wages in the U.S.** and make up over half of all projected new jobs in STEM fields, making Computer Science one of the most in-demand college degrees. And computing is used all around us and in virtually every field. It's foundational knowledge that all students need. But computer science is marginalized throughout education. Only 57.5% of U.S. high schools teach any computer science courses and only 4% of bachelor's degrees are in Computer Science. We need to improve access for all students, including groups who have traditionally been underrepresented.



Yet, there were only 4,192 graduates in computer science in 2020 and only 40% of all public high schools teach a foundational computer science course.

## Computer science in Florida

- Only **14,202 exams were taken in AP Computer Science by high school students in Florida** in 2020 (2,783 took AP CS A and 11,419 took AP CSP).
- Only 31% were taken by female students (22% for AP CS A and 33% for AP CSP); only 4,473 exams were taken by Hispanic/Latino/Latina students (793 took AP CS A and 3,680 took AP CSP); only 1,168 exams were taken by Black/African American students (158 took AP CS A and 1,010 took AP CSP); only 78 exams were taken by Native American/Alaskan students (11 took AP CS A and 67 took AP CSP); only 18 exams were taken by Native Hawaiian/Pacific Islander students (3 took AP CS A and 15 took AP CSP).
- Only **389 schools** in FL (38% of FL schools with AP programs) offered an AP Computer Science course in 2019-2020 (18% offered AP CS A and 35% offered AP CSP), which is 29 more than the previous year.
- Teacher preparation programs in Florida did not graduate a single new teacher prepared to teach computer science in 2018.
- According to a representative survey from Google/Gallup, school administrators in FL support expanding computer science education opportunities: 67% of principals surveyed think CS is just as or more important than required core classes.

## What can you do to support K-12 CS education in Florida?

- Send a letter to your school/district asking them to expand computer science offerings at every grade level: [www.code.org/promote/letter](https://code.org/promote/letter)
- Find out if your school teaches computer science or submit information about your school's offerings at [www.code.org/your-school](https://www.code.org/your-school).
- Visit [www.code.org/educate/3rd-party](https://www.code.org/educate/3rd-party) to find out about courses and curriculum from a variety of providers, including Code.org.

## Code.org's impact in Florida

- In Florida, Code.org’s curriculum is used in
  - 20% of elementary schools
  - 21% of middle schools
  - 17% of high schools
- There are 63,237 teacher accounts and 2,425,609 student accounts on Code.org in Florida.
- Of students in Florida using Code.org curriculum last school year,
  - 49% attend high needs schools
  - 15% are in rural schools
  - 44% are female students
  - 21% are Black/African American students
  - 21% are Hispanic/Latino/Latina students
  - 0% are Native American/Alaskan students
  - 0% are Native Hawaiian/Pacific Islander students
  - 32% are white students
  - 5% are Asian students
  - 4% are students who identify as two or more races
- Code.org, its regional partner(s) Broward County Public Schools, Florida International University, Orlando Science Center, Tampa Bay STEM Network, and University of North Florida & STEM2 Hub, and 39 facilitators have provided professional learning in Florida for
  - 7,911 teachers in CS Fundamentals (K-5)
  - 635 teachers in Exploring Computer Science or Computer Science Discoveries
  - 425 teachers in Computer Science Principles

## What can your state do to improve computer science education?

States and local school districts need to adopt a broad policy framework to provide all students with access to computer science. The following ten recommendations are a menu of best practices that states can choose from to support and expand computer science. Not all states will be in a position to adopt all of the policies. Read more about these 10 policy ideas at [https://advocacy.code.org/2023\\_making\\_cs\\_foundational.pdf](https://advocacy.code.org/2023_making_cs_foundational.pdf) and see our rubric for describing state policies at <http://bit.ly/9policiesrubric>.

▮ **State Plan** - Florida **has not** yet created a state plan for K-12 computer science. A plan that articulates the goals for computer science, strategies for accomplishing the goals, and timelines for carrying out the strategies is important for making computer science a fundamental part of a state’s education system.

▮ **K-12 Standards** - Florida adopted K–12 computer science standards as a strand within the state science standards in 2016. Benchmarks within each grade band address concepts of equity, such as bias, accessible technology, and inclusivity.

▮ **Funding** - SB 2500 (FY 2024), HB 5001 (FY 2023), SB 2500 (FY 2022), HB 5001 (FY 2021), and SB 2500 (FY 2020) allocated \$10M annually for computer science teacher certification and professional development. SB 7070 (FY 2019) established recruitment awards for newly hired teachers who are content experts in computer science.

▮ **Certification** - In Florida, teachers can obtain the K–12 certification as an initial license or an add-on endorsement through academic coursework. State funding for computer science can be used to support credentialing for teachers.

▮ **Pre-Service Programs** - Florida **has not yet** established programs at institutions of higher education to offer computer science to preservice teachers. The computer science teacher shortage can be addressed by exposing more preservice teachers to computer science during their required coursework or by creating specific pathways for computer science teachers.

▮ **Dedicated State Position** - The Florida Department of Education has a Computer Science Program Specialist.

▮ **Require High Schools to Offer** - HB 495 (2018) required all middle and high schools to offer computer science or provide students access via the Florida Virtual School if a district is unable to provide access.

▮ **Count Towards Graduation** - In Florida, computer science can count as a math or science credit for graduation (HB 7071 in 2019 removed the industry certification requirement).

▮ **IHE Admission** - Florida **does not yet** allow computer science to count as a core admission requirement at institutions of higher education. Admission policies that do not include rigorous computer science courses as meeting a core entrance requirement, such as in mathematics or science, discourage

students from taking such courses in secondary education. State leaders can work with institutions of higher education to ensure credit and articulation policies align with secondary school graduation requirements.

▣ **Graduation Requirement** - Florida **does not yet** require students to take computer science to earn a high school diploma. Graduation requirements ensure that all students get exposure to computer science.

## Follow us!

Join our efforts to give every student in every school the opportunity to learn computer science. Learn more at [code.org](https://code.org), or follow us on **Facebook** and **Twitter**.

Launched in 2013, Code.org® is a nonprofit dedicated to expanding access to computer science, and increasing participation by women and underrepresented youth. Our vision is that every student in every school should have the opportunity to learn computer science.

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Who can you connect with locally to talk about K-12 CS education policy?

- You can reach Code.org's policy contact for your state, Anthony Owen, at [anthony.owen@code.org](mailto:anthony.owen@code.org).

Data is from the Conference Board for job demand, the Bureau of Labor Statistics for state salary and national job projections data, the College Board for AP exam data, the National Center for Education Statistics for university graduate data, the Gallup and Google research study Education Trends in the State of Computer Science in U.S. K-12 Schools for parent demand, the 2018 Computer Science Access Report for schools that offer computer science, and Code.org for its own courses, professional learning programs, and participation data.