

# Support K-12 Computer Science Education in Louisiana

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 654 graduates in computer science in 2020 and only 35% of all public high schools teach a foundational computer science course.

## Computer science in Louisiana

- Only **1,000 exams were taken in AP Computer Science by high school students in Louisiana** in 2020 (275 took AP CS A and 725 took AP CSP).
- Only 35% were taken by female students (28% for AP CS A and 38% for AP CSP); only 97 exams were taken by Hispanic/Latino/Latina students (30 took AP CS A and 67 took AP CSP); only 126 exams were taken by Black/African American students (23 took AP CS A and 103 took AP CSP); only 4 exams were taken by Native American/Alaskan students (0 took AP CS A and 4 took AP CSP); only 3 exams were taken by Native Hawaiian/Pacific Islander students (0 took AP CS A and 3 took AP CSP).
- Only **66 schools in LA** (25% of LA schools with AP programs) offered an AP Computer Science course in 2019-2020 (13% offered AP CS A and 20% offered AP CSP), which is 3 more than the previous year.
- Teacher preparation programs in Louisiana 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 LA support expanding computer science education opportunities: 65% 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 Louisiana?

- 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/yourschool](https://www.code.org/yourschool).
- Visit [www.code.org/educate/3rdparty](https://www.code.org/educate/3rdparty) to find out about courses and curriculum from a variety of providers, including Code.org.

## Code.org's impact in Louisiana

- In Louisiana, Code.org's curriculum is used in
  - 13% of elementary schools
  - 13% of middle schools
  - 12% of high schools
- There are 8,855 teacher accounts and 333,750 student accounts on Code.org in Louisiana.
- Of students in Louisiana using Code.org curriculum last school year,
  - 62% attend high needs schools
  - 24% are in rural schools
  - 45% are female students
  - 35% are Black/African American students
  - 4% are Hispanic/Latino/Latina students
  - 0% are Native American/Alaskan students
  - 0% are Native Hawaiian/Pacific Islander students
  - 43% are white students
  - 4% are Asian students
  - 4% are students who identify as two or more races
- Code.org, its regional partner(s) Louisiana State University, and 6 facilitators have provided professional learning in Louisiana for
  - 814 teachers in CS Fundamentals (K-5)
  - 50 teachers in Exploring Computer Science or Computer Science Discoveries
  - 49 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** - SB 190 (2022) establishes the Computer Science Education Advisory Commission to provide recommendations to the State Board of Elementary and Secondary Education through the state Department of Education for the development and implementation of a state action plan for the delivery of education in computer science in all public schools. The organizational meeting of the advisory committee will be called by August 15, 2022.

**K-12 Standards** - Louisiana **does not yet** have rigorous computer science standards publicly available across K-12. Computer science has often been confused with broader technology education in schools. The state could strengthen its computer science programs by publicly adopting discrete standards for computer science focused on both the creation and use of software and computing technologies at all levels of K-12 education. These standards can be guided by the concepts, practices, and recommendations in the K-12 Computer Science Framework, found at <http://www.k12cs.org>.

**Funding** - Louisiana **does not yet** provide dedicated funding for rigorous computer science professional development and course support. Although funds may be available via broader programs, the state can strengthen its computer science programs by creating specific opportunities to bring computer science to school districts, such as matching fund programs.

**Certification** - In Louisiana, teachers with existing licensure can add a 6–12 specialty content area in computer science through academic coursework and/or passing the Praxis CS exam.

**Pre-Service Programs** - Louisiana **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** - Louisiana **does not yet** have dedicated computer science positions in state or local education agencies. Creating a statewide computer science leadership position within the state education agency can help expand state-level implementation of computer science education initiatives. Similar positions at the local level could support districts' expansion of course offerings and professional development.

**Require High Schools to Offer** - Louisiana **does not yet** require that all secondary schools offer computer science. The state can support the expansion of computer science courses by adopting policies that require schools to offer a computer science course based on rigorous standards, with appropriate implementation timelines and allowing for remote and/or in-person courses.

**Count Towards Graduation** - In Louisiana, AP Computer Science A can count as an advanced mathematics credit for graduation.

□ **Higher Ed Admission** - AP Computer Science A can count as a mathematics credit required for admission at institutions of higher education in Louisiana.

□ **Graduation Requirement** - Louisiana **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.