HB216

197137-4

By Representatives Faulkner, Collins, Baker, Fincher, Drummond, Garrett, Gaston, Shiver, Scott, Givan, Drake, Treadaway, McCutcheon and Faust

RFD: Education Policy

First Read: 19-MAR-19

ENROLLED, An Act,

Relating to public education; to phase in the requirement that each public K-12 school in the state offer courses in computer science; to provide funding for evidence-based, authentic computer science professional learning for K-12 computer science teachers; to provide for a designated state computer science specialist at the State Department of Education; to provide secondary and postsecondary graduation credit and admissions pathways in computer science for students; and would establish multiple computer science certification pathways for public school teachers, including requirements for institutions of higher education to provide preservice coursework that leads to certification in computer science.

BE IT ENACTED BY THE LEGISLATURE OF ALABAMA:

Section 1. For the purposes of this act, the following terms shall have the following meanings:

(1) BOARD. The State Board of Education.

(2) COMPUTER SCIENCE. The study of computers and algorithmic processes, including their principles, their hardware and software designs, their implementation, and their impact on society. Content should focus on teaching students how to create new technologies, not simply how to use technology.

(3) COMPUTER SCIENCE COURSES AND CONTENT. Courses that teach computer science either as a standalone course implementation in middle and high schools, or, for elementary school, integrated into other content areas.

(4) DEPARTMENT. The State Department of Education.

(5) ELEMENTARY SCHOOL. Includes grades kindergarten to six, inclusive.

(6) HIGH SCHOOL. Includes grades nine to 12, inclusive.

(7) HIGH QUALITY PROFESSIONAL LEARNING. Professional development activities that satisfy all of the following:

a. Clarify the conceptual foundations of computer science.

b. Teach research-based practices, including hands-on and inquiry-based learning.

c. Are intended for existing teachers, with or without previous exposure to computer science.

(8) HIGH QUALITY PROFESSIONAL LEARNING PROVIDERS. Institutions of higher education, nonprofits, or private entities that have successfully designed, implemented, and scaled high quality, evidence-based computer science professional learning for teachers and recommended by the superintendent and approved by the board.

(9) MIDDLE SCHOOL. Includes grades seven and eight.

(10) PUBLIC SCHOOL. Includes public K-12 elementary schools, middle schools, and high schools.

(11) SUPERINTENDENT. The State Superintendent of Education.

Section 2. (a)(1) Beginning in the 2020-2021 school year, each public high school shall offer at least one authentic computer science course from a department approved list.

(2) Beginning in the 2021-2022 school year, each public middle school shall offer instruction in middle school computer science courses approved by the department.

(3) Beginning in the 2022-2023 school year, each public elementary school shall offer instruction on the basics of computer science and computational thinking.

(b) A computer science course or instruction in computer science offered by a public school shall satisfy all of the following:

(1) Be of high quality, as defined by the department.

(2) Meet or exceed the standards and curriculum requirements, as they relate to authentic computer science, established by the board in the state course of study for digital literacy and computer science pursuant to Section 16-35-4, Code of Alabama 1975, and be on the approved list of computer science courses.

(c) A computer science course offered by a public high school should be offered through an in-person setting and shall be offered as a virtual or distance learning course option only when an in-person classroom setting is not practicable. A rationale for using the virtual or distance learning option shall be included in the annual report.

~~(d) The curricula that is used for the computer science course shall be open platform and available across multiple computing devices, such as available within a web browser.~~

~~(e)~~ (d) The enforcement of this section shall comply with Section 16-1-11.1, Code of Alabama 1975.

Section 3. (a) Subject to appropriation from the Legislature, funds shall be appropriated to the department and the department shall allocate those funds to eligible entities to develop and implement teacher professional learning programs for the required computer science courses and content.

(b) For the purposes of this section, eligible entities shall include high quality computer science professional learning providers, including institutions of higher education physically located in the state, nonprofits dedicated to providing high quality computer science professional learning as determined by the superintendent, or private entities.

(c) For the purposes of this section, eligible entities do not include a local education agency or a consortium of local education agencies.

(d) Eligible uses of funds appropriated for computer science professional learning are as follows:

(1) High quality professional learning for K-12 computer science content, stipends for attending professional learning, traveling to professional learning activities, and participating in mentoring and coaching.

(2) Credentialing for K-12 computer science teachers, including course-specific permits and computer science endorsements pursuant to Section 6.

(3) Creation of resources to support implementing computer science activities in the classroom. These resources may be developed during computer science professional learning workshops or at other times outside of the teacher instructional day.

(4) Recruiting students to enroll in high quality computer science coursework.

(5) Software. Funding may not be used for hardware and equipment.

(e) As a condition of receiving computer science professional learning funds, eligible entities shall submit an application to the department. The application, at a minimum, shall address how the entity plans to do all of the following:

(1) Reach inservice or preservice, or both, teachers with little to no computer science background who are presently teaching, or interested in teaching, high quality computer science courses in a public school.

(2) Use research-based or evidence-based practices for high quality professional learning.

(3) Focus professional learning on the conceptual foundations of computer science.

(4) Reach and support teachers who serve students who are underrepresented in computer science.

(5) Provide teachers experience with hands-on, inquiry-based practices for teaching computer science.

(6) Accommodate students with special needs in each district and school.

(7) Ensure that participating schools begin offering the courses or content, or both, within the same or no later than the next school year following the teacher receiving the professional learning.

(8) Confirm that the proposed curriculum is available on multiple platforms, so that teachers and students may access and use the curriculum on multiple devices.

(f) The department shall prioritize the following applications, in no specific order of preference:

(1) Institutions of higher education that are physically located in the state that are working with

providers of high quality computer science professional learning.

(2) Proposals that describe strategies to enroll teachers in high quality computer science professional learning activities that will lead to more females and underrepresented minorities, students with significant economic barriers to academic success, students with disabilities, and English language learners enrolling in high quality computer science courses in public schools.

(3) Proposals from rural or urban areas with a low concentration of K-12 computer science offerings.

(4) Nonprofits dedicated to providing high quality computer science professional learning or private entities working in partnership with local education agencies.

(g) Any monies appropriated to the department not disbursed by the end of the fiscal year shall not revert ~~to the credit of the general revenue,~~ and shall not be used for purposes not described in this section.

(h) Metrics.

(1) Not later than September 30 of each year, eligible entities receiving funds appropriated for computer science professional learning shall annually submit a computer science expansion data report to the department. The report, at a minimum, shall include all of the following information:

a. The number of teachers trained.

b. The grade levels for which those teachers were trained.

c. The schools in which those teachers were trained.

(2) Not later than September 30 of each year, each school that has received computer science professional learning shall annually submit a computer science expansion data report to the department. The report, at a minimum, shall include all of the following information:

~~b.~~ a. The number of students enrolled in high quality computer science courses taught by a teacher trained in a high quality professional activity conducted during that year.

~~c.~~ b.The number of students offered a computer science course through a virtual or distance learning course option and assurances that these settings shall continue to work towards in-person course options where students are taught by a trained teacher. A rationale for using the virtual or distance learning option shall be included in the annual report.

~~d.~~ c. The aggregate gender, racial, and socioeconomic diversity of the students described in paragraph ~~b.~~ a.

~~e.~~ d.The number of and diversity of students with a score of three or above on advanced placement examinations for high school advanced placement computer science courses, and

the number of diverse students who earn postsecondary graduate credit for completing a dual enrollment course provided by an institution of higher education physically located in the state while that student is enrolled in high school. This student data shall be provided annually in the report in the year following the academic year of course completion.

~~f.~~ e. The number of teachers that began implementing computer science as a result of attending a high quality computer science professional learning activity that year versus the number of teachers attending a high quality computer science professional learning activity who were already teaching high quality computer science courses at the middle or high school level.

~~(2)~~ (3) On or before December 1 of each year, the department shall post all computer science expansion data reports received on the website of the department.

~~(3)~~ (4) On or before June 30, 2020, the department shall establish the position of state computer science specialist and shall designate an individual to serve in that position. Among other duties, the specialist shall review the reports to ensure the requirements delineated in ~~paragraphs a. to f., inclusive, of subdivision (1)~~ subdivisions (1) and (2), are satisfied.

Section 4. (a) Before the beginning of the 2020-2021 school year, the department shall develop and the board shall

approve, pursuant to Chapter 35 of Title 16, Code of Alabama 1975, a rigorous K-12 course of study for digital literacy and computer science and shall consider existing computer science frameworks and content standards including, but not limited to, the K-12 computer science framework and the K-12 computer science content standards developed by the Computer Science Teachers Association.

(b) To ensure continuity in early learning, the department and the Department of Early Childhood Education may form a committee to create developmentally appropriate technology content standards for prekindergarten students.

Section 5. (a) The Governor shall establish a computer science education task force to develop a state strategic plan for expanding computer science education in the public schools in Alabama.

(b) The membership of the task force shall include all of the following:

(1) One member of the House of Representatives, as appointed by the Speaker of the House, and one member of the Senate, as appointed by the President Pro Tempore of the Senate.

(2) A representative of the board, as appointed by the board.

(3) The state computer science specialist and two additional representatives of the department, as appointed by the superintendent.

(4) A representative of the Department of Early Childhood Education, as appointed by the ~~director~~ secretary.

(5) A representative of the Alabama Community College System, as appointed by the board of trustees of the system.

(6) A representative of the Alabama Workforce Council, as appointed by the council.

(7) A representative of the Alabama Education Association, as appointed by the executive director.

(8) A representative of the Alabama Association of School Boards, as appointed by the executive director.

(9) A representative of the School Superintendents of Alabama, as appointed by the executive director.

(10) A representative of the Council for Leaders in Alabama Schools, as appointed by the board of directors.

(11) A representative of A Plus Education Partnership, as appointed by the board of directors.

(12) A representative of the Business Education Alliance of Alabama, as appointed by the president.

(13) The education policy advisor to the Governor.

(14) A representative of the Alabama Workforce Development Board, as appointed by the board.

(15) Two geographically and sector diverse industry representatives, including individuals with software and computer science specific focus, as appointed by the Governor.

(16) A representative of Alabama historically black colleges and universities, as appointed by the Lieutenant Governor.

(17) Two representatives from four-year colleges and universities, as appointed by the Executive Director of the Alabama Commission on Higher Education.

(18) One teacher leader from a statewide association representing computer science teachers and three computer science teachers with representation from the grade bands of high school, middle school, and elementary school, as appointed by the superintendent.

(19) Two curriculum and professional development providers, as appointed by the superintendent.

(20) Other representatives as determined by the Governor.

(c) All appointing authorities shall coordinate their appointments so that diversity of gender, race, and geographical areas is reflective of the makeup of this state. Members of the task force shall serve without compensation. The expenses of members who are legislators may be paid out of any funds appropriated to the Legislature or out of any funds appropriated for joint interim committees of the Legislature,

but in the amounts as if they were performing legislative duties.

(d) The superintendent, in consultation with the task force, shall develop a state strategic plan for a statewide computer science education initiative including, but not limited to, all of the following:

(1) A statement of purpose that describes the objectives or goals the department desires to accomplish by implementing a computer science education initiative, the strategies by which those goals shall be achieved, and a timeline for achieving those goals.

(2) A summary of the current state landscape for K-12 computer science education, including metrics on the diversity of students taking those courses.

(3) A plan for expanding computer science education opportunities to every school in the state within five years as provided in Section 2.

(4) A plan for the development of rigorous standards and curriculum guidelines for K-12 computer science, including ways to incorporate computer science into existing standards at the elementary school level, as appropriate.

(5) A plan for defining high quality computer science professional learning for preservice teachers and inservice teachers seeking a computer science endorsement or course specific permit, as provided in Section 6.

(6) An ongoing evaluation process of the computer science initiative that is overseen by the superintendent in consultation with the task force.

(7) Proposed rules that incorporate the principles of the state strategic plan for computer science education into the public education system of the state.

(8) A plan to ensure long term sustainability of the computer science initiative.

(9) A plan for the task force to annually review and make recommendations to the superintendent for approved computer science professional learning to satisfy requirements for the computer science permit.

(e) On or before December 31, 2019, the superintendent, after consultation with the task force, shall present the state strategic plan for computer science education to the Chair of the House Education Policy Committee and the Chair of the Senate Education Policy Committee.

(f) The task force shall perpetuate after the deadline provided in subsection (e), at the pleasure of the Governor, for the purposes of carrying out subdivision (6) of subsection (c). Members of the task force shall serve at the pleasure of the Governor after the deadline provided in subsection (e).

(g) The superintendent shall implement this act within the department, including the development and

implementation of the state strategic plan for computer science education.

Section 6. Before June 30, 2020, the department shall create all of the following:

(1) A secondary computer science certification pathway for preservice teachers.

(2) An endorsement in computer science for all teachers who hold a valid Professional Educator Certificate and demonstrate sufficient content knowledge in the course material as determined by the department. Upon passing the Praxis, this certification does not have a two-year time and service requirement to begin teaching.

(3) A course specific permit for teachers without a secondary computer science certification or endorsement, who hold a valid Professional Educator Certificate. The course specific permit shall be issued upon the completion of a nationally recognized professional learning course that is linked to a recognized high quality middle school or high school computer science course or an approved preservice computer science pathway offered at an institution of higher education for a specific permitted course. The state computer science specialist shall maintain a vetted list of supported professional learning opportunities aligned to K-12 Computer Science Teachers Association (CSTA) standards and advanced placement computer science course and exam descriptions in

computer science that are linked to recognized high quality computer science courses offered at the middle school and high school levels. The course specific permits shall only be issued to teach a course on the vetted list by a teacher who has completed professional learning courses linked to the vetted list, as determined by the state computer science specialist.

(4) Career and technical education certificate options shall remain in place to provide business, industry, and other postsecondary noneducation certified graduates with the opportunity to teach computer science courses.

Section 7. (a) Before June 30, 2020, and in accordance with Section 16-35-4, Code of Alabama 1975, the department shall identify approved computer science courses that may fulfill one unit of academic credit for any mathematics or science course for high school graduation.

(b) Beginning with the graduating class of 2021, for the purposes of high school graduation requirements and satisfying mathematics or science freshman admission requirements for a public institution of higher education physically located in this state, as determined by the institution of higher education, a computer science course successfully completed under subsection (a) shall be equivalent to either of the following:

(1) One mathematics course credit.

(2) One science course credit.

Section 8. ~~(a) Subject to appropriations from the Legislature, the Alabama Commission on Higher Education shall create a scholarship program for preservice teachers seeking a computer science certification option as provided in Section 6, to take an authentic computer science course. A preservice teacher enrolled in a state accredited institution of higher education who is in the process of earning a Class A or Class B professional teaching certification in any field may receive a scholarship after successful completion of one course in computer science. The amount and duration of the scholarship shall be determined by the Alabama Commission on Higher Education.~~

~~(b) The Alabama Commission on Higher Education, subject to appropriations from the Legislature, shall grant funds to eligible preservice education programs in Alabama to develop and implement pathways in computer science education. The pathways shall prepare an enrolled preservice teacher to add a certification to teach computer science education to his or her intended major and areas of certification. The pathways shall be open to preservice teachers at the secondary level.~~

(a) Subject to appropriations from the Legislature, the teaching field of computer science shall be added to the list of eligible subject areas identified within the Alabama Math and Science Teacher Education Loan Repayment Program

(AMSTEP), Article 3, commencing with Section 16-5-50, Chapter 5, Title 16, Code of Alabama 1975, with the following exceptions:

(1) Computer science recipients shall be eligible to receive a total of three thousand dollars ($3,000) per year or one thousand five hundred dollars ($1,500) per semester worked.

(2) Computer science teachers will not be eligible to receive the acute shortage area supplement, until such time as the Alabama Commission on Higher Education and the State Department of Education concur that there is sufficient need or resources, or both, available to allow its inclusion.

(b) The Alabama Commission on Higher Education may adopt any rules necessary for the incorporation of the teaching field of computer science into AMSTEP within the parameters provided by this section.

Section 9. This act shall become effective on the first day of the third month following its passage and approval by the Governor, or its otherwise becoming law.

Speaker of the House of Representatives

President and Presiding Officer of the Senate

House of Representatives

I hereby certify that the within Act originated in and was passed by the House 02-MAY-19, as amended.

Jeff Woodard
Clerk

Senate	28-MAY-19	Amended and Passed
House	28-MAY-19	Concurred in Senate Amendment