

1 HB216
2 197137-3
3 By Representatives Faulkner, Collins, Baker, Fincher,
4 Drummond, Garrett, Gaston, Shiver, Scott, Givan, Drake,
5 Treadaway, McCutcheon and Faust
6 RFD: Education Policy
7 First Read: 19-MAR-19

1 impact on society. Content should focus on teaching students
2 how to create new technologies, not simply how to use
3 technology.

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

8 (4) DEPARTMENT. The State Department of Education.

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

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

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

15 a. Clarify the conceptual foundations of computer
16 science.

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

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

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

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

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

3 (11) SUPERINTENDENT. The State Superintendent of
4 Education.

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

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

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

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

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

20 (2) Meet or exceed the standards and curriculum
21 requirements, as they relate to authentic computer science,
22 established by the board in the state course of study for
23 digital literacy and computer science pursuant to Section
24 16-35-4, Code of Alabama 1975, and be on the approved list of
25 computer science courses.

26 (c) A computer science course offered by a public
27 high school should be offered through an in-person setting and

1 shall be offered as a virtual or distance learning course
2 option only when an in-person classroom setting is not
3 practicable. A rationale for using the virtual or distance
4 learning option shall be included in the annual report.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

20 (1) Institutions of higher education that are
21 physically located in the state that are working with
22 providers of high quality computer science professional
23 learning.

24 (2) Proposals that describe strategies to enroll
25 teachers in high quality computer science professional
26 learning activities that will lead to more females and
27 underrepresented minorities, students with significant

1 economic barriers to academic success, students with
2 disabilities, and English language learners enrolling in high
3 quality computer science courses in public schools.

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

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

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

13 (h) Metrics.

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

19 a. The number of teachers trained.

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

22 c. The schools in which those teachers were trained.

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

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

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

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

15 ~~e.~~ d. The number of and diversity of students with a
16 score of three or above on advanced placement examinations for
17 high school advanced placement computer science courses, and
18 the number of diverse students who earn postsecondary graduate
19 credit for completing a dual enrollment course provided by an
20 institution of higher education physically located in the
21 state while that student is enrolled in high school. This
22 student data shall be provided annually in the report in the
23 year following the academic year of course completion.

24 ~~f.~~ e. The number of teachers that began implementing
25 computer science as a result of attending a high quality
26 computer science professional learning activity that year
27 versus the number of teachers attending a high quality

1 computer science professional learning activity who were
2 already teaching high quality computer science courses at the
3 middle or high school level.

4 ~~(2)~~ (3) On or before December 1 of each year, the
5 department shall post all computer science expansion data
6 reports received on the website of the department.

7 ~~(3)~~ (4) On or before June 30, 2020, the department
8 shall establish the position of state computer science
9 specialist and shall designate an individual to serve in that
10 position. Among other duties, the specialist shall review the
11 reports to ensure the requirements delineated in ~~paragraphs a.~~
12 ~~to f., inclusive, of subdivision (1)~~ subdivisions (1) and (2),
13 are satisfied.

14 Section 4. (a) Before the beginning of the 2020-2021
15 school year, the department shall develop and the board shall
16 approve, pursuant to Chapter 35 of Title 16, Code of Alabama
17 1975, a rigorous K-12 course of study for digital literacy and
18 computer science and shall consider existing computer science
19 frameworks and content standards including, but not limited
20 to, the K-12 computer science framework and the K-12 computer
21 science content standards developed by the Computer Science
22 Teachers Association.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

9 (13) The education policy advisor to the Governor.

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

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

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

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

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

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

1 (20) Other representatives as determined by the
2 Governor.

3 (c) All appointing authorities shall coordinate
4 their appointments so that diversity of gender, race, and
5 geographical areas is reflective of the makeup of this state.
6 Members of the task force shall serve without compensation.
7 The expenses of members who are legislators may be paid out of
8 any funds appropriated to the Legislature or out of any funds
9 appropriated for joint interim committees of the Legislature,
10 but in the amounts as if they were performing legislative
11 duties.

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

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

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

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

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

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

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

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

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

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

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

26 (f) The task force shall perpetuate after the
27 deadline provided in subsection (e), at the pleasure of the

1 Governor, for the purposes of carrying out subdivision (6) of
2 subsection (c). Members of the task force shall serve at the
3 pleasure of the Governor after the deadline provided in
4 subsection (e).

5 (g) The superintendent shall implement this act
6 within the department, including the development and
7 implementation of the state strategic plan for computer
8 science education.

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

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

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

19 (3) A course specific permit for teachers without a
20 secondary computer science certification or endorsement, who
21 hold a valid Professional Educator Certificate. The course
22 specific permit shall be issued upon the completion of a
23 nationally recognized professional learning course that is
24 linked to a recognized high quality middle school or high
25 school computer science course or an approved preservice
26 computer science pathway offered at an institution of higher
27 education for a specific permitted course. The state computer

1 science specialist shall maintain a vetted list of supported
2 professional learning opportunities aligned to K-12 Computer
3 Science Teachers Association (CSTA) standards and advanced
4 placement computer science course and exam descriptions in
5 computer science that are linked to recognized high quality
6 computer science courses offered at the middle school and high
7 school levels. The course specific permits shall only be
8 issued to teach a course on the vetted list by a teacher who
9 has completed professional learning courses linked to the
10 vetted list, as determined by the state computer science
11 specialist.

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

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

21 (b) Beginning with the graduating class of 2021, a
22 computer science course successfully completed under
23 subsection (a) shall be equivalent to either of the following:

24 (1) One mathematics course credit.

25 (2) One science course credit.

26 Section 8. ~~(a) Subject to appropriations from the~~
27 ~~Legislature, the Alabama Commission on Higher Education shall~~

1 ~~create a scholarship program for preservice teachers seeking a~~
2 ~~computer science certification option as provided in Section~~
3 ~~6, to take an authentic computer science course. A preservice~~
4 ~~teacher enrolled in a state accredited institution of higher~~
5 ~~education who is in the process of earning a Class A or Class~~
6 ~~B professional teaching certification in any field may receive~~
7 ~~a scholarship after successful completion of one course in~~
8 ~~computer science. The amount and duration of the scholarship~~
9 ~~shall be determined by the Alabama Commission on Higher~~
10 ~~Education.~~

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

19 ~~(a) Subject to appropriations from the Legislature,~~
20 ~~the teaching field of computer science shall be added to the~~
21 ~~list of eligible subject areas identified within the Alabama~~
22 ~~Math and Science Teacher Education Loan Repayment Program~~
23 ~~(AMSTEP), Article 3, commencing with Section 16-5-50, Chapter~~
24 ~~5, Title 16, Code of Alabama 1975, with the following~~
25 ~~exceptions:~~

26 ~~(1) Computer science recipients shall be eligible to~~
27 ~~receive a total of three thousand dollars (\$3,000) per year or~~

1 one thousand five hundred dollars (\$1,500) per semester
2 worked.

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

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

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

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House of Representatives

Read for the first time and re-
ferred to the House of Representa-
tives committee on Education Policy
..... 19-MAR-19

Read for the second time and placed
on the calendar 1 amendment 25-APR-19

Read for the third time and passed
as amended..... 02-MAY-19

Yeas 102, Nays 0, Abstains 0

Jeff Woodard
Clerk