

By: Representatives Bennett, Creekmore IV,
Miles, Summers, Felsher, Boyd, Haney,
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To: Education

COMMITTEE SUBSTITUTE
FOR
HOUSE BILL NO. 1165

1 AN ACT TO AUTHORIZE AND DIRECT THE STATE DEPARTMENT OF
2 EDUCATION TO IMPLEMENT A MANDATORY K-12 COMPUTER SCIENCE
3 CURRICULUM BASED ON THE MISSISSIPPI COLLEGE AND CAREER-READINESS
4 STANDARDS FOR COMPUTER SCIENCE WHICH INCLUDES INSTRUCTION IN, BUT
5 NOT LIMITED TO, COMPUTATIONAL THINKING, CYBER-RELATED,
6 PROGRAMMING, CYBER SECURITY, DATA SCIENCE, ROBOTICS, AND OTHER
7 COMPUTER SCIENCE AND CYBER-RELATED CONTENT; TO PRESCRIBE MINIMUM
8 COMPONENTS OF THE CURRICULUM AT EACH GRADE LEVEL; AND TO PROVIDE
9 FOR TEACHER TRAINING AS NEEDED AT ALL GRADE LEVELS.

10 BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF MISSISSIPPI:

11 **SECTION 1.** The Mississippi Legislature finds that:

12 (a) Education in computer science is a critical need
13 for the students of Mississippi for the twenty-first century;

14 (b) More than half of high schools in Mississippi do
15 not teach a computer science course;

16 (c) There are multitudes of unfulfilled computer
17 science jobs in the state; and

18 (d) The logical thinking skills taught by computer
19 science are very valuable in many noncomputer science jobs, as
20 technology has become embedded in most professions.



21 **SECTION 2.** As used in this act, the following terms shall
22 have the meaning ascribed in this section:

23 (a) "Computer science" means the study of computers,
24 algorithmic processes, coding, and logical thinking, including
25 computer principles, their hardware and software designs, their
26 implementation and their impact on society.

27 (b) "Computer science courses" means high school and
28 middle school courses that teach computer science as stand-alone
29 implementations; and elementary curriculum that provides
30 instruction in computer science as stand-alone implementations or
31 embedded in other subjects and focuses on how to create and
32 understand technology, rather than simply using technology.

33 (c) "Offer" means providing a course taught by a
34 computer science teacher:

35 (i) Who is onsite at the physical location of the
36 school; or

37 (ii) Who is not onsite at the physical location of
38 the school but conducts the course through virtual means with a
39 proctor onsite at the physical location of the school.

40 **SECTION 3.** (1) The State Department of Education is
41 authorized and directed to implement K-12 computer science
42 curriculum based on the 2018 Mississippi College and
43 Career-Readiness Standards for computer science, which includes
44 instruction in, but not limited to:

45 (a) Computational thinking;



46 (b) Problem-solving;
47 (c) Programming;
48 (d) Cyber security;
49 (e) Data science;
50 (f) Robotics; and
51 (g) Other computer science and cyber-related content.

52 (2) Beginning in the 2021-2022 school year:

53 (a) Each local school district shall provide that all
54 middle schools in its school system offer instruction in
55 exploratory computer science;

56 (b) Each local school district shall provide that fifty
57 percent (50%) of elementary schools in its school system offer a
58 minimum of one (1) hour of instruction in computer science each
59 week;

60 (c) Each charter school that serves middle or high
61 school students shall offer a course in computer science;

62 (d) Each charter school that serves elementary school
63 students shall offer instruction in computer science.

64 (3) Beginning in the 2022-2023 school year:

65 (a) Each local school district shall provide that at
66 least fifty percent (50%) of the high schools in its school system
67 offer a course in computer science;

68 (b) Each local school district shall provide that all
69 elementary schools in its school system offer a minimum of one (1)
70 hour of instruction in exploratory computer science each week.



71 (4) Beginning in the 2023-2024 school year, each local
72 school district shall provide that all schools in its school
73 system offer instruction in computer science.

74 **SECTION 4.** The State Department of Education shall ensure
75 that the Mississippi Virtual School operated pursuant to Section
76 37-161-3 has sufficient capacity to enable schools to utilize high
77 quality instruction computer science courses to meet the needs of
78 such schools as a result of this act.

79 **SECTION 5.** (1) Subject to appropriations made by the
80 Legislature, the State Department of Education shall provide
81 annual training for teachers, counselors and administrators in
82 order to phase in the K-12 computer science curriculum. Preference
83 should be given to districts who have the fewest number of
84 teachers trained in computer science. The State Department of
85 Education shall work with the Center for Cyber Education at
86 Mississippi State University to develop and coordinate teacher
87 training. The State Department of Education may contract with
88 private and nonprofit providers for teacher training and for
89 student instruction, and is encouraged to utilize available
90 cost-free computer training, instruction and resources. Teachers
91 may receive computer science instruction training through an
92 online platform.

93 (2) The State Department of Education shall:

94 (a) Convene a task force composed of at least one (1)
95 representative from each of the following categories:



- 96 (i) The State Superintendent of Education;
- 97 (ii) A local superintendent of education where at
- 98 least fifty percent (50%) of the schools in the district teach
- 99 computer science;
- 100 (iii) A local superintendent of education where
- 101 less than fifty percent (50%) of the schools in the district teach
- 102 computer science;
- 103 (iv) A Grade K-5 teacher;
- 104 (v) A Grade 6-8 teacher;
- 105 (vi) A Grade 9-12 teacher;
- 106 (vii) A representative from a state institution of
- 107 higher learning; and
- 108 (viii) A representative from the business
- 109 community.

110 (b) The task force shall provide a report by January 1,

111 2021, to the Governor, the Lieutenant Governor, the Speaker of the

112 House of Representatives, the Chairman of the Senate Education

113 Committee and the Chairman of the House Education Committee. The

114 report shall include a strategic plan for statewide computer

115 science education initiatives including, but not limited to, the

116 following:

- 117 (i) A summary of the current state landscape for
- 118 K-12 computer science education;



119 (ii) A plan for expanding computer science
120 education opportunities to every school in the state by 2023-2024
121 school year;

122 (iii) A plan for the development of preservice and
123 in-service teachers seeking a computer science endorsement or
124 course specific license, in order to meet timeline for course
125 requirements;

126 (iv) The development of a vetted list of approved
127 vendors in computer science education that are recognized as high
128 quality computer science courses or instruction, which should
129 weigh preference on cost and ease of implementation; and

130 (v) The identification of approved computer
131 science courses that may fulfill one (1) unit of academic credit
132 for mathematics or science courses for high school graduation.

133 (2) The State Department of Education shall submit a report
134 by December 31 of each year through 2024 to the Governor, the
135 Lieutenant Governor, the Speaker of the House of Representatives,
136 the Chairman of the Senate Education Committee and the Chairman of
137 the House Education Committee. The report shall include a list of
138 schools in each district teaching computer science and the number
139 of computer science teachers trained in each district.

140 **SECTION 6.** This act shall take effect and be in force from
141 and after July 1, 2020, and shall stand repealed on June 30, 2020.

