HOUSE BILL NO. 320

101ST GENERAL ASSEMBLY

INTRODUCED BY REPRESENTATIVE FITZWATER.

AN ACT

To repeal section 170.018, RSMo, and to enact in lieu thereof one new section relating to computer science courses.

Be it enacted by the General Assembly of the state of Missouri, as follows:

Section A. Section 170.018, RSMo, is repealed and one new section enacted in lieu
2 thereof, to be known as section 170.018, to read as follows:

170.018. 1. (1) For purposes of this section, "computer science course" means a course
2 in which students study computers and algorithmic processes, including their principles,
3 hardware and software designs, implementation, and impact on society. **The term shall include,**
4 **but not be limited to, a stand-alone course at any elementary, middle, or high school or a**
5 **course at any elementary or middle school that embeds computer science content within**
6 **other subjects.**
7   (2) The department of elementary and secondary education shall, before July 1, 2019,
8 develop a high school graduation policy that allows a student to fulfill one unit of academic
9 credit with a district-approved computer science course meeting the standards of subsection 2
10 of this section for any mathematics, science, or practical arts unit required for high school
11 graduation. The policy shall require that all students have either taken all courses that require
12 end-of-course examinations for math and science or are on track to take all courses that require
13 end-of-course examinations for math and science under the Missouri school improvement
14 program in order to receive credit toward high school graduation under this subsection.
15   (3) A school district shall communicate to students electing to use a computer science
16 course for a mathematics unit that some institutions of higher education may require four units
17 of academic credit in mathematics for college admission. The parent, guardian, or legal

EXPLANATION — Matter enclosed in bold-faced brackets **[thus]** in the above bill is not enacted and is intended
to be omitted from the law. Matter in **bold-face** type in the above bill is proposed language.

18   custodian of each student who chooses to take a computer science course to fulfill a unit of
19   academic credit in mathematics shall sign and submit to the school district a document
20   containing a statement acknowledging that taking a computer science course to fulfill a unit of
21   academic credit in mathematics may have an adverse effect on college admission decisions.
22   (4) The department of elementary and secondary education and the department of higher
23   education and workforce development shall cooperate in developing and implementing academic
24   requirements for computer science courses offered in any grade or grades not lower than the
25   ninth nor higher than the twelfth grade.
26   2. (1) The department of elementary and secondary education shall convene a work
27   group to develop and recommend rigorous academic performance standards relating to computer
28   science for students in kindergarten and in each grade not higher than the twelfth grade. The
29   work group shall include, but not be limited to, educators providing instruction in kindergarten
30   or in any grade not higher than the twelfth grade and representatives from the department of
31   elementary and secondary education, the department of higher education and workforce
32   development, business and industry, and institutions of higher education. The department of
33   elementary and secondary education shall develop written curriculum frameworks relating to
34   computer science that may be used by school districts. The requirements of section 160.514
35   shall not apply to this section.
36   (2) The state board of education shall adopt and implement academic performance
37   standards relating to computer science beginning in the 2019-20 school year.
38   3. Before July 1, 2019, the department of elementary and secondary education shall
39   develop a procedure by which any teacher who holds a certificate of license to teach under
40   section 168.021 and demonstrates sufficient content knowledge of computer science shall receive
41   a special endorsement on [his or her] **the teacher's** license signifying [his or her] **the teacher's**
42   specialized knowledge in computer science.
43   4. (1) For purposes of this subsection, "eligible entity" means:
44   (a) A local educational agency, or a consortium of local educational agencies, in the
45   state, including charter schools that have declared themselves local educational agencies;
46   (b) An institution of higher education in the state; or
47   (c) A nonprofit or private provider of nationally recognized and high-quality computer
48   science professional development, as determined by the department of elementary and secondary
49   education.
50   (2) There is hereby created in the state treasury the "Computer Science Education Fund".
51   The fund shall consist of all moneys that may be appropriated to it by the general assembly and
52   any gifts, contributions, grants, or bequests received from private or other sources for the purpose
53   of providing teacher professional development programs relating to computer science. The state

54 treasurer shall be custodian of the fund. In accordance with sections 30.170 and 30.180, the state
55 treasurer may approve disbursements. The fund shall be a dedicated fund and, upon
56 appropriation, moneys in the fund shall be used solely for the administration of grants to eligible
57 entities as described in this section. Notwithstanding the provisions of section 33.080 to the
58 contrary, any moneys remaining in the fund at the end of the biennium shall not revert to the
59 credit of the general revenue fund. The state treasurer shall invest moneys in the fund in the
60 same manner as other funds are invested. Any interest and moneys earned on such investments
61 shall be credited to the fund.
62   (3) The state board of education shall award grants from the computer science education
63 fund to eligible entities for the purpose of providing teacher professional development programs
64 relating to computer science. An eligible entity wishing to receive such a grant shall submit an
65 application to the department of elementary and secondary education addressing how the entity
66 plans to:
67   (a) Reach new and existing teachers with little computer science background;
68   (b) Use effective practices for professional development;
69   (c) Focus the training on the conceptual foundations of computer science;
70   (d) Reach and support historically underrepresented students in computer science;
71   (e) Provide teachers with concrete experience with hands-on, inquiry-based practices;
72 and
73   (f) Accommodate the particular needs of students and teachers in each district and
74 school.
75   5. **(1) For all school years beginning on or after July 1, 2022, each:**
76   **(a) Public high school and charter high school shall offer at least one computer**
77 **science course;**
78   **(b) Public middle school or charter middle school shall offer instruction in**
79 **exploratory computer science; and**
80   **(c) Public elementary school or charter elementary school shall offer instruction in**
81 **the basics of computer science and computational thinking.**
82   **(2) Any computer science course or instruction offered under this subsection shall:**
83   **(a) Be of high quality as defined by the state board of education;**
84   **(b) Meet or exceed the computer science performance standards developed and**
85 **adopted by the department of elementary and secondary education under this section; and**
86   **(c) For any computer science course offered by a public high school or charter high**
87 **school, offer the course in an in-person setting or as a virtual or distance course option only**
88 **if a traditional classroom setting is not feasible.**

89   **(3) On or before June thirtieth of each school year, each school district shall submit**
90 **to the department of elementary and secondary education a report for the current school**
91 **year which shall include, but not be limited to:**
92   **(a) The names and course codes of computer science courses offered in each school**
93 **in the district with a course description and which computer science performance**
94 **standards are covered, to the extent such information is available;**
95   **(b) The number and percentage of students who enrolled in each computer science**
96 **course, listed by the categories in subparagraphs a. to f. of this paragraph. If a category**
97 **contains one to five students or contains a quantity of students that would allow the**
98 **quantity of another category that contains five or fewer to be deduced, the number shall**
99 **be replaced with a symbol:**
100   **a. Sex;**
101   **b. Race and ethnicity;**
102   **c. Special education status including, but not limited to, students receiving services**
103 **under the federal Individuals with Disabilities Education Act (IDEA) (20 U.S.C. Section**
104 **1400 et seq., as amended) or Section 504 of the federal Rehabilitation Act of 1973 (29**
105 **U.S.C. Section 794), as amended;**
106   **d. English language learner status;**
107   **e. Eligibility for free or reduced price meals; and**
108   **f. Grade level; and**
109   **(c) The number of computer science instructors at each school, listed by the**
110 **following categories:**
111   **a. Applicable certifications;**
112   **b. Sex;**
113   **c. Race and ethnicity; and**
114   **d. Highest academic degree.**
115   **(4) On or before June thirtieth of each school year, the department of elementary**
116 **and secondary education shall post the following on the department's website:**
117   **(a) Data received under paragraphs (a) and (b) of subdivision (3) of this subsection,**
118 **disaggregated by school and aggregated statewide; and**
119   **(b) Data received under paragraph (c) of subdivision (3) of this subsection,**
120 **aggregated statewide.**
121   **(5) On or before June thirtieth of each school year, the department of elementary**
122 **and secondary education shall publish a list of computer science course codes and names**
123 **with a course description and an indication of which courses meet or exceed the**

124 **department of elementary and secondary education's computer science performance**
125 **standards.**
126   **6.   The department of elementary and secondary education shall appoint a**
127 **computer science supervisor. The computer science supervisor shall be responsible for**
128 **implementing the provisions of this section.**
129   **7. For all school years beginning on or after July 1, 2022, a computer science course**
130 **successfully completed and counted toward state graduation requirements shall be**
131 **equivalent to one mathematics course, one science course, or one practical arts credit for**
132 **the purpose of satisfying any admission requirements of any public institution of higher**
133 **education in this state.**
134   **8.** The department of elementary and secondary education shall promulgate rules to
135 implement the provisions of this section. Any rule or portion of a rule, as that term is defined
136 in section 536.010, that is created under the authority delegated in this section shall become
137 effective only if it complies with and is subject to all of the provisions of chapter 536 and, if
138 applicable, section 536.028. This section and chapter 536 are nonseverable, and if any of the
139 powers vested with the general assembly pursuant to chapter 536 to review, to delay the effective
140 date, or to disapprove and annul a rule are subsequently held unconstitutional, then the grant of
141 rulemaking authority and any rule proposed or adopted after December 18, 2018, shall be invalid
142 and void.

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