

House _____ Amendment NO. _____

Offered By _____

1 AMEND House Bill No. 297, Page 1, Section A, Line 2, by inserting after all of said section and
2 line the following:

3
4 "170.018. 1. (1) For purposes of this section, "computer science course" means a course in
5 which students study computers and algorithmic processes, including their principles, hardware and
6 software designs, implementation, and impact on society. The term shall include, but not be limited
7 to, a stand-alone course at any elementary, middle, or high school or a course at any elementary or
8 middle school that embeds computer science content within other subjects.

9 (2) The department of elementary and secondary education shall, before July 1, 2019,
10 develop a high school graduation policy that allows a student to fulfill one unit of academic credit
11 with a district-approved computer science course meeting the standards of subsection 2 of this
12 section for any mathematics, science, or practical arts unit required for high school graduation. The
13 policy shall require that all students have either taken all courses that require end-of-course
14 examinations for math and science or are on track to take all courses that require end-of-course
15 examinations for math and science under the Missouri school improvement program in order to
16 receive credit toward high school graduation under this subsection.

17 (3) A school district shall communicate to students electing to use a computer science
18 course for a mathematics unit that some institutions of higher education may require four units of
19 academic credit in mathematics for college admission. The parent, guardian, or legal custodian of
20 each student who chooses to take a computer science course to fulfill a unit of academic credit in
21 mathematics shall sign and submit to the school district a document containing a statement
22 acknowledging that taking a computer science course to fulfill a unit of academic credit in
23 mathematics may have an adverse effect on college admission decisions.

24 (4) The department of elementary and secondary education and the department of higher
25 education and workforce development shall cooperate in developing and implementing academic
26 requirements for computer science courses offered in any grade or grades not lower than the ninth
27 nor higher than the twelfth grade.

28 2. (1) The department of elementary and secondary education shall convene a work group
29 to develop and recommend rigorous academic performance standards relating to computer science
30 for students in kindergarten and in each grade not higher than the twelfth grade. The work group
31 shall include, but not be limited to, educators providing instruction in kindergarten or in any grade
32 not higher than the twelfth grade and representatives from the department of elementary and
33 secondary education, the department of higher education and workforce development, business and
34 industry, and institutions of higher education. The department of elementary and secondary
35 education shall develop written curriculum frameworks relating to computer science that may be
36 used by school districts. The requirements of section 160.514 shall not apply to this section.

Action Taken _____ Date _____

1 (2) The state board of education shall adopt and implement academic performance standards
2 relating to computer science beginning in the 2019-20 school year.

3 3. Before July 1, 2019, the department of elementary and secondary education shall develop
4 a procedure by which any teacher who holds a certificate of license to teach under section 168.021
5 and demonstrates sufficient content knowledge of computer science shall receive a special
6 endorsement on ~~[his or her]~~ the teacher's license signifying ~~[his or her]~~ the teacher's specialized
7 knowledge in computer science.

8 4. (1) For purposes of this subsection, "eligible entity" means:

9 (a) A local educational agency, or a consortium of local educational agencies, in the state,
10 including charter schools that have declared themselves local educational agencies;

11 (b) An institution of higher education in the state; or

12 (c) A nonprofit or private provider of nationally recognized and high-quality computer
13 science professional development, as determined by the department of elementary and secondary
14 education.

15 (2) There is hereby created in the state treasury the "Computer Science Education Fund".
16 The fund shall consist of all moneys that may be appropriated to it by the general assembly and any
17 gifts, contributions, grants, or bequests received from private or other sources for the purpose of
18 providing teacher professional development programs relating to computer science. The state
19 treasurer shall be custodian of the fund. In accordance with sections 30.170 and 30.180, the state
20 treasurer may approve disbursements. The fund shall be a dedicated fund and, upon appropriation,
21 moneys in the fund shall be used solely for the administration of grants to eligible entities as
22 described in this section. Notwithstanding the provisions of section 33.080 to the contrary, any
23 moneys remaining in the fund at the end of the biennium shall not revert to the credit of the general
24 revenue fund. The state treasurer shall invest moneys in the fund in the same manner as other funds
25 are invested. Any interest and moneys earned on such investments shall be credited to the fund.

26 (3) The state board of education shall award grants from the computer science education
27 fund to eligible entities for the purpose of providing teacher professional development programs
28 relating to computer science. An eligible entity wishing to receive such a grant shall submit an
29 application to the department of elementary and secondary education addressing how the entity
30 plans to:

31 (a) Reach new and existing teachers with little computer science background;

32 (b) Use effective practices for professional development;

33 (c) Focus the training on the conceptual foundations of computer science;

34 (d) Reach and support historically underrepresented students in computer science;

35 (e) Provide teachers with concrete experience with hands-on, inquiry-based practices; and

36 (f) Accommodate the particular needs of students and teachers in each district and school.

37 5. (1) For all school years beginning on or after July 1, 2022, each:

38 (a) Public high school and charter high school shall offer at least one computer science
39 course;

40 (b) Public middle school or charter middle school shall offer instruction in exploratory
41 computer science; and

42 (c) Public elementary school or charter elementary school shall offer instruction in the
43 basics of computer science and computational thinking.

44 (2) Any computer science course or instruction offered under this subsection shall:

45 (a) Be of high quality as defined by the state board of education;

46 (b) Meet or exceed the computer science performance standards developed and adopted by
47 the department of elementary and secondary education under this section; and

48 (c) For any computer science course offered by a public high school or charter high school,
49 offer the course in an in-person setting or as a virtual or distance course option only if a traditional

1 classroom setting is not feasible.

2 (3) On or before June thirtieth of each school year, each school district shall submit to the
3 department of elementary and secondary education a report for the current school year which shall
4 include, but not be limited to:

5 (a) The names and course codes of computer science courses offered in each school in the
6 district with a course description and which computer science performance standards are covered, to
7 the extent such information is available;

8 (b) The number and percentage of students who enrolled in each computer science course,
9 listed by the categories in subparagraphs a. to f. of this paragraph. If a category contains one to five
10 students or contains a quantity of students that would allow the quantity of another category that
11 contains five or fewer to be deduced, the number shall be replaced with a symbol:

12 a. Sex;

13 b. Race and ethnicity;

14 c. Special education status including, but not limited to, students receiving services under
15 the federal Individuals with Disabilities Education Act (IDEA) (20 U.S.C. Section 1400 et seq., as
16 amended) or Section 504 of the federal Rehabilitation Act of 1973 (29 U.S.C. Section 794), as
17 amended;

18 d. English language learner status;

19 e. Eligibility for free or reduced price meals; and

20 f. Grade level; and

21 (c) The number of computer science instructors at each school, listed by the following
22 categories:

23 a. Applicable certifications;

24 b. Sex;

25 c. Race and ethnicity; and

26 d. Highest academic degree.

27 (4) On or before June thirtieth of each school year, the department of elementary and
28 secondary education shall post the following on the department's website:

29 (a) Data received under paragraphs (a) and (b) of subdivision (3) of this subsection,
30 disaggregated by school and aggregated statewide; and

31 (b) Data received under paragraph (c) of subdivision (3) of this subsection, aggregated
32 statewide.

33 (5) On or before June thirtieth of each school year, the department of elementary and
34 secondary education shall publish a list of computer science course codes and names with a course
35 description and an indication of which courses meet or exceed the department of elementary and
36 secondary education's computer science performance standards.

37 6. The department of elementary and secondary education shall appoint a computer science
38 supervisor. The computer science supervisor shall be responsible for implementing the provisions
39 of this section.

40 7. For all school years beginning on or after July 1, 2022, a computer science course
41 successfully completed and counted toward state graduation requirements shall be equivalent to one
42 science course or one practical arts credit for the purpose of satisfying any admission requirements
43 of any public institution of higher education in this state.

44 8. The department of elementary and secondary education shall promulgate rules to
45 implement the provisions of this section. Any rule or portion of a rule, as that term is defined in
46 section 536.010, that is created under the authority delegated in this section shall become effective
47 only if it complies with and is subject to all of the provisions of chapter 536 and, if applicable,
48 section 536.028. This section and chapter 536 are nonseverable, and if any of the powers vested
49 with the general assembly pursuant to chapter 536 to review, to delay the effective date, or to

1 disapprove and annul a rule are subsequently held unconstitutional, then the grant of rulemaking
2 authority and any rule proposed or adopted after December 18, 2018, shall be invalid and void.

3 170.036. 1. There is hereby established the "Computer Science Education Task Force".

4 2. The task force shall consist of the following members:

5 (1) Two members of the house of representatives, with one member to be appointed by the
6 speaker of the house of representatives and one member to be appointed by the minority leader of
7 the house of representatives;

8 (2) Two members of the senate, with one member to be appointed by the president pro
9 tempore of the senate and one member to be appointed by the minority leader of the senate;

10 (3) The governor or the governor's designee;

11 (4) The commissioner of education or the commissioner's designee;

12 (5) The commissioner of higher education or the commissioner's designee; and

13 (6) Six members who represent the interests of each of the following groups, to be
14 appointed by the commissioner of education:

15 (a) The state board of education;

16 (b) Private industry in this state with interest in computer science;

17 (c) Nonprofit organizations;

18 (d) An association of school superintendents;

19 (e) A statewide association representing computer science teachers; and

20 (f) A secondary teacher leader from career and technical education representing computer
21 science teachers.

22 3. The mission of the computer science education task force shall be to develop a state
23 strategic plan for expanding a statewide computer science education program, including the
24 following:

25 (1) A statement of purpose that describes the objectives or goals the state board of education
26 will accomplish by implementing a computer science education program, the strategies by which
27 those goals will be achieved, and a timeline for achieving those goals;

28 (2) A summary of the current state landscape for K-12 computer science education,
29 including demographic reporting of students taking these courses;

30 (3) A plan for expanding computer science education opportunities to every school in the
31 state within five years and increasing the representation of students from traditionally underserved
32 groups, in computer science including female students, students from historically underrepresented
33 racial and ethnic groups, students with disabilities, English-language learner students, students who
34 qualify for free and reduced-price meals, and rural students;

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

38 (5) A plan for ensuring teachers are well-prepared to begin teaching computer science,
39 including defining high-quality professional learning for in-service teachers and strategies for pre-
40 service teacher preparation;

41 (6) An ongoing evaluation process that is overseen by the state board of education;

42 (7) Proposed rules that incorporate the principles of the master plan into the state's public
43 education system as a whole; and

44 (8) A plan to ensure long-term sustainability for computer science education.

45 4. The speaker of the house of representatives shall designate the chair of the task force, and
46 the president pro tempore of the senate shall designate the vice chair of the task force.

47 5. Members of the task force shall serve without compensation, but the members and any
48 staff assigned to the task force shall receive reimbursement for actual and necessary expenses
49 incurred in attending meetings of the task force or any subcommittee thereof. All task force

1 members shall be subject to the same conflict of interest provisions in chapter 105 that are enforced
2 by the Missouri ethics commission in the same manner that elected or appointed officials and
3 employees are subject to such provisions.

4 6. The task force shall hold its first meeting within one month from the effective date of this
5 section.

6 7. Before June 30, 2022, the task force shall present a summary of its activities and any
7 recommendations for legislation to the general assembly.

8 8. The computer science education task force shall dissolve on June 30, 2023."; and
9

10 Further amend said bill by amending the title, enacting clause, and intersectional references
11 accordingly.