

WEST VIRGINIA LEGISLATURE

2022 REGULAR SESSION

ENROLLED

Senate Bill 529

BY SENATORS BLAIR (MR. PRESIDENT) AND BALDWIN

(BY REQUEST OF THE EXECUTIVE)

[Passed March 12, 2022; in effect 90 days from passage]

1 AN ACT to amend and reenact §18-2-12 of the Code of West Virginia, 1931, as amended, relating
2 to computer science education in West Virginia schools; recognizing a need to provide
3 coursework on computational thinking, block-based programming, text-based
4 programming, network communication, computer architecture, coding, application
5 development, digital literacy, and cyber security; requiring the board to update and build
6 upon prior computer science education plans and policy to include additional subject
7 matter; and removing obsolete language.

Be it enacted by the Legislature of West Virginia:

ARTICLE 2. STATE BOARD OF EDUCATION.

§18-2-12. Computer science courses of instruction; learning standards; state board plan development.

1 (a) Legislative findings:

2 (1) Computer technology increasingly is pervasive in nearly every function of society from
3 consumer products to transportation, communications, electrical infrastructure, logistics,
4 agriculture, medical treatments, research, security, and financial transactions;

5 (2) The U. S. Bureau of Labor Statistics predicts that by 2024, there will be more than
6 800,000 new jobs in the STEM fields and more than two thirds of these directly will be in
7 computing occupations;

8 (3) Studying computer science prepares students to enter many career areas, both within
9 and outside of computing, teaching them logical reasoning, algorithmic thinking, design, and
10 structured problem-solving skills applicable in many contexts from science and engineering to the
11 humanities and business;

12 (4) Computer science is an established discipline at the collegiate and post-graduate
13 levels but, unfortunately, computer science concepts and courses have not kept pace in the K-12
14 curriculum, to the point that the nation faces a serious shortage of computer scientists at all levels
15 that is likely to continue for the foreseeable future; and

16 (5) Organizations such as the Computer Science Teachers Association, the International
17 Society for Technology in Education, and technology industry leaders have developed
18 recommendations for standards, curriculum, and instructional resources for computer technology
19 learning in K-12 schools.

20 (6) Foundational age-appropriate instruction in the computer science field for all students
21 beginning in elementary school with required and optional advanced computer science instruction
22 for middle school and high school students has become an important component of a well-
23 developed education. Computer science standards should align to relevant aspects of the field
24 such as computational thinking, block-based programming, text-based programming, network
25 communication, computer architecture, coding, application development, and cyber security.
26 Computer science education standards should be established to ensure students have the
27 fundamentals to be successful in a digital-driven world and the advanced knowledge to prepare
28 them for careers in or linked to computer science.

29 (b) Prior to the 2023 regular legislative session, the state board shall submit a plan to the
30 Legislative Oversight Commission on Education Accountability, that builds upon certain plans
31 which may have been developed and submitted in previous years, to implement and update
32 computer science instruction and learning standards in the public schools. The plan shall include
33 at least the following:

34 (1) Recommendations for a core set of learning standards designed to provide the
35 foundation for a complete computer science curriculum and its implementation at the K-12 level
36 including, but not limited to:

37 (A) Providing relevant course work in the areas of computational thinking, block-based
38 programming, text-based programming, network communication, computer architecture, coding,
39 application development, digital literacy, and cyber security; and

40 (B) Encouraging schools to integrate base level computer science skills into each student's
41 required course work, and make available, in grades six through 12, additional secondary level

42 computer science courses that will allow interested students to study facets of computer science
43 in more depth and prepare them for entry into the workforce or college; and

44 (C) Increasing the availability of rigorous computer science for all students.

45 (2) Recommendations for teaching standards and secondary certificate endorsements if
46 necessary for teachers to deliver curriculum appropriate to meet the standards;

47 (3) Recommendations for units of instruction or courses in academic and vocational
48 technical settings to include computer programing, network communication, computer
49 architecture, coding, application development, and cyber security, that complement any existing
50 K-12 computer science and IT curricula where they are already established, especially the
51 advanced placement computer science curricula and professional IT certifications; and

52 (4) Proposals for implementation of the recommendations over a period not to exceed
53 four years and estimates of any associated additional costs.

54 (c) Nothing in this section requires adoption or implementation of any specific
55 recommendation or any level of appropriation by the Legislature.

56 (d) Recognizing the importance of computer science instruction and how computer
57 science instruction will assist students in their transition to post-secondary opportunities, the state
58 board shall adopt a policy detailing the appropriate level of computer science instruction that shall
59 be available to students at each programmatic level.

60 (e) The West Virginia Department of Education shall develop and offer professional
61 development opportunities to ensure educators are equipped with the requisite knowledge and
62 skill to deliver computer science instruction as outlined in this section. The department may
63 partner with high-quality computer science professional learning providers in developing and
64 offering the professional development opportunities.

The Joint Committee on Enrolled Bills hereby certifies that the foregoing bill is correctly enrolled.

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Chairman, Senate Committee

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Chairman, House Committee

Originated in the Senate.

In effect 90 days from passage.

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Clerk of the Senate

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Clerk of the House of Delegates

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President of the Senate

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Speaker of the House of Delegates

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Day of, 2022.

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Governor