



SOUTH CAROLINA REVENUE AND FISCAL AFFAIRS OFFICE
STATEMENT OF ESTIMATED FISCAL IMPACT
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This fiscal impact statement is produced in compliance with the South Carolina Code of Laws and House and Senate rules. The focus of the analysis is on governmental expenditure and revenue impacts and may not provide a comprehensive summary of the legislation.

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| Bill Number: | H. 4702 | Introduced on January 9, 2024 |
| Author: | Davis | |
| Subject: | Computer Science Education Initiative Act | |
| Requestor: | House Education and Public Works | |
| RFA Analyst(s): | Bryant | |
| Impact Date: | March 25, 2024 | |

Fiscal Impact Summary

This bill requires the State Board of Education, in consultation with the Education Oversight Committee (EOC) and the Office of the Governor, to adopt a statewide computer science plan on or before December 31, 2024. This bill also requires each public high school and public charter high school to offer at least one computer science course that meets certain criteria by the beginning of the 2024-25 school year. Additionally, the bill requires the State Board of Education to promulgate regulations to create certification pathways for computer science teachers by no later than July 1, 2025, and the S.C. Department of Education (SCDE) to develop criteria for postsecondary computer science teacher preparation programs. The Commission on Higher Education (CHE) is tasked with determining if any financial incentives are needed by institutions of higher education to design programs to prepare and credential computer science teachers. The bill also requires SCDE to create a career pathways system for the information technology cluster before July 1, 2025. Further, SCDE must develop, procure, or identify certain curricula before July 1, 2026.

SCDE indicates that the provisions of the bill will increase General Fund expenses of the department by \$2,151,600 in FY 2024-25. Of this amount, \$2,026,600 is recurring for 7.0 FTEs, professional development, equipment, and developing and maintaining the required strategies and communications system on information about career pathways. Non-recurring funds of \$100,000 are needed every five years to conduct the required review of computer science standards, and \$25,000 in non-recurring funds are needed in FY 2024-25 to develop the career pathways system. SCDE further indicates that the provisions of the bill will increase non-recurring General Fund expenses of the department by an additional \$8,000,000 in FY 2025-26 to procure 250,000 textbooks for the new curricula for students in kindergarten through twelfth grade, for a total cost of \$10,026,600. Based on information provided by SCDE, recurring funds are expected to total \$2,026,600 beginning in FY 2025-26.

SCDE also indicates that this bill as a whole could increase General Fund expenses of the department by an additional \$120,000 in FY 2024-25 for additional state certified adjunct teachers, materials, and course development to meet expected course enrollment demands. SCDE further indicates that the department believes it would be best practices to double the recurring expenses associated with Sections 59-29-250(B)(D)(E)(F) in order to fully implement the provisions of this bill. These additional funds will provide for more specialists to assist local

school districts, allow for more review and analysis on access and capacity at the local level, and provide professional training to education majors in computer science. This would increase recurring expenses of the SCDE by an additional \$1,501,600 beginning in FY 2024-25.

This bill will have no expenditure impact on the state agency schools. The Governor's School for Agriculture at John de la Howe, the Governor's School for Science and Mathematics, the School for the Deaf and Blind, and the Wil Lou Gray Opportunity School indicate that they currently satisfy the requirements of the bill. The Governor's School for the Arts and Humanities indicates that the agency will manage the provisions of the bill with existing appropriations.

This bill will have no expenditure impact on EOC, the Office of the Governor, or CHE. The agencies indicate that they can manage the provisions of the bill with existing appropriations.

The overall expenditure impact of this bill on local school districts will vary. SCDE surveyed the seventy-three regular school districts and three charter school districts and received responses from twenty-nine districts. Twelve of the responding districts indicate that the bill will have no expenditure impact. Four districts anticipate the need to hire additional computer science instructors, purchase equipment and other supplies, develop new curricula, and provide additional training and professional development but report that the cost is currently undetermined. The thirteen remaining districts indicate that implementing the provisions of the bill will increase expenses by an amount ranging from \$2,500 to \$5,010,325 beginning in FY 2024-25. Ten of these districts anticipate the need to hire additional instructors. Several districts also report the need to purchase equipment and instructional materials, develop curricula, and provide training and professional development. Additionally, some districts anticipate that the provisions of the bill may increase expenses in elementary and middle schools, in addition to high schools.

Explanation of Fiscal Impact

Introduced on January 9, 2024

State Expenditure

The following sections of the bill will affect state expenditures:

Section 59-29-250(B)

This section of the bill requires the State Board of Education, in consultation with EOC and the Office of the Governor, to adopt a statewide plan to improve computer science education in kindergarten through twelfth grade on or before December 31, 2024.

S.C. Department of Education. The Office of Career and Technical Education (OCTE) in SCDE reports that the statewide computer science plan has not been updated since it was introduced in 2018. Therefore, OCTE anticipates that a significant number of meetings, revisions, professional development, and resources will be needed to manage this provision of the bill. SCDE indicates that this section of the bill will increase recurring General Fund expenses of the department by \$480,000 beginning in FY 2024-25. Of this amount, \$130,000 is

for meetings and revisions to the statewide computer science plan. The remaining \$350,000 is for professional development.

Education Oversight Committee. EOC indicates that this section of the bill requires the committee to perform activities that can be conducted within the normal course of agency business. Therefore, this bill will have no expenditure impact on EOC.

Office of the Governor. This section of the bill will have no expenditure impact on the Office of the Governor. The Office of the Governor indicates that it can manage the provisions of the bill with existing appropriations.

Section 59-29-250(C)

This section of the bill requires the State Board of Education to conduct a cyclical review of grade appropriate standards for computer science, computational thinking, and computer coding for kindergarten through twelfth grade at least every five years.

S.C. Department of Education. OCTE reports that computer literacy standards for kindergarten through eighth grade were last updated in 2017, and computer literacy standards for high school were last updated in 2018. SCDE indicates that this section of the bill will increase expenses of the department by \$100,000 every five years to review and update computer literacy standards.

Section 59-29-250(D)

This section of the bill requires each public high school and public charter high school to offer at least one computer science course meeting certain criteria by the beginning of the 2024-25 school year.

S.C. Department of Education. SCDE indicates that this section of the bill will increase recurring General Fund expenses of the department by \$721,600 beginning in FY 2024-25. Of this amount, \$441,600 is for 4.0 FTEs (regional kindergarten through twelfth grade implementation specialists). The remaining \$280,000 is for 2.0 FTEs, course materials, and design costs for developing expanded computer science courses for VirtualSC. SCDE reports that VirtualSC currently does not have full-time staff in the computer science subject area. The programs are currently taught by part-time instructors, and only introductory courses in computer science are offered. SCDE indicates that additional staff are needed to provide expanded courses in intermediate and advanced course levels and manage increases in enrollment.

State Agency Schools. The Governor's School for Agriculture at John de la Howe indicates that the agency currently satisfies the computer science course requirements specified in the bill by offering computer science courses through VirtualSC and dual enrollment course offerings with Piedmont Technical College. The Governor's School for the Arts and Humanities indicates that the agency will manage this provision of the bill with existing appropriations. The Governor's School for Science and Mathematics (GSSM) indicates that this section of the bill will have no expenditure impact since it currently offers computer science courses that satisfy the requirements of the bill. Additionally, GSSM reports that the agency has included 4.0 FTEs in its FY 2024-25 budget request in order to teach computer science and engineering courses online.

GSSM indicates that the additional FTEs will allow the agency to assist public high schools and public charter high schools in South Carolina in meeting the requirements of the bill by offering free online computer science courses taught live by GSSM faculty members. The School for the Deaf and Blind and the Wil Lou Gray Opportunity School indicate that they currently satisfy the requirements in the bill.

Section 59-29-250(E)

This section of the bill requires SCDE, beginning in the 2024-2025 school year, to perform the following:

- employ one full-time employee whose sole responsibility is to coordinate and lead the South Carolina Computer Science Education Initiative;
- support kindergarten through twelfth grade academic and computer science teachers in designing interdisciplinary, project-based instruction and assignments that engage students in applying literacy, math, and computational thinking skills to solve problems;
- design career pathways that connect students to postsecondary programs, degrees, or postsecondary credentials in high demand career fields;
- offer professional development and teacher endorsements to new teachers who will teach computer science;
- provide information and materials which identify emerging career opportunities in computer science and related fields to parents, students, teachers, and guidance counselors; and
- assist districts in developing partnerships with business, industry, higher education, and communities to provide afterschool and extracurricular activities that engage students in computer science.

S.C. Department of Education. SCDE indicates that this section of the bill will increase recurring General Fund expenses of the department by \$100,000 beginning in FY 2024-25 for 1.0 FTE (computer science specialist) to implement the provisions of this section of the bill.

Section 59-29-250(F)

This section of the bill specifies that the State Board of Education must promulgate regulations to create certification pathways for computer science teachers by no later than July 1, 2025. Additionally, SCDE must develop criteria for postsecondary computer science teacher preparation programs.

S.C. Department of Education. SCDE indicates that this section of the bill will increase recurring General Fund expenses of the department by \$200,000 beginning in FY 2024-25 for a computer science micro-credential framework for kindergarten through twelfth grade.

Section 59-29-250(G)

This section of the bill requires SCDE to develop guidelines for school districts and schools outlining the educational and degree requirements appropriate for computer science teachers by no later than July 1, 2025. Also, CHE must determine if any financial incentives are needed by institutions of higher education to design programs to prepare and credential computer science teachers.

S.C. Department of Education. SCDE indicates that this section of the bill will increase recurring General Fund expenses of the department by \$200,000 beginning in FY 2024-25. Of this amount, \$60,000 is for software licenses, and \$140,000 is for additional equipment to implement the provisions of this section of the bill.

Commission on Higher Education. This section of the bill will have no expenditure impact on CHE. The commission indicates that it can manage the provisions of the bill with existing appropriations.

Section 59-29-250(H)(1)

This section of the bill requires SCDE to create a career pathways system for the information technology cluster before July 1, 2025, that does the following:

- aligns public education and postsecondary education systems and the career and technology education services provided within and across program providers;
- aligns with state and regional workforce needs;
- provides students, teachers, parents, and families with general information about career pathways and with strategies to support students in acquiring the academic, employability, and technical skills that employers demand; and
- promotes the involvement and cooperative effort of parents, teachers, and school counselors in assisting students in making these choices, in setting career goals, and in developing individual graduation plans to achieve these goals.

S.C. Department of Education. SCDE indicates that this section of the bill will increase General Fund expenses of the department by \$350,000. Of this amount, \$25,000 is for non-recurring funds in FY 2024-25 to create the required career pathways system. The remaining \$325,000 is recurring beginning in FY 2024-25. Of the recurring funds, \$75,000 is for developing a required strategies and communications system on information about career pathways for students, teachers, parents, and other stakeholders. The remaining recurring \$250,000 is for training for teachers on coding and computer programming beginning in the elementary school grades and to build professional capacity among educators.

Section 59-29-250(H)(2)

This section of the bill requires SCDE, before July 1, 2026, to develop, procure, or identify curricula that:

- are aligned with state computer science standards;
- are organized around the career pathways and aligned with state and regional workforce needs as determined by the Department of Commerce;
- provide students with strong academic and real world problem-solving skills;
- provide students with individualized educational, academic, and career oriented choices and a greater exposure to career information and opportunities in information technology and computer programming; and
- provide students beginning in elementary school with the opportunity to learn coding and computer programming.

S.C. Department of Education. SCDE indicates that this section of the bill will increase non-recurring General Fund expenses of the department by \$8,000,000 in FY 2025-26 to procure 250,000 textbooks for the new computer science curricula for students in kindergarten through twelfth grade.

Section 59-29-250(H)(3)

Beginning July 1, 2025, SCDE is required to issue an annual report to the General Assembly that documents the number of students who have completed a career pathway in information technology and that documents student access to and participation in coding and computer programming.

S.C. Department of Education. SCDE indicates that this section of the bill requires the department to perform activities that can be conducted within the normal course of agency business. Therefore, this section of the bill will have no expenditure impact on SCDE.

In total, this bill will increase General Fund expenses of the department by \$2,151,600 in FY 2024-25. Of this amount, \$2,026,600 is recurring for 7.0 FTEs, professional development, equipment, and developing and maintaining the required strategies and communications system on information about career pathways. Non-recurring funds of \$100,000 are needed every five years to conduct the required review of computer science standards, and \$25,000 in non-recurring funds are needed in FY 2024-25 to develop the career pathways system. SCDE further indicates that the provisions of the bill will increase non-recurring General Fund expenses of the department by an additional \$8,000,000 in FY 2025-26 to procure 250,000 textbooks for the new curricula for students in kindergarten through twelfth grade, for a total cost of \$10,026,600. Based on information provided by SCDE, recurring funds are expected to total \$2,026,600 beginning in FY 2025-26.

Also, SCDE indicates that this bill as a whole could increase General Fund expenses of the department by an additional \$120,000 in FY 2024-25 for additional state certified adjunct teachers, materials, and course development to meet expected course enrollment demands.

SCDE further indicates that the department believes it would be best practices to double the recurring expenses associated with Sections 59-29-250(B)(D)(E)(F) in order to fully implement the provisions of this bill. These additional funds will provide for more specialists to assist local school districts, allow for more review and analysis on access and capacity at the local level, and provide professional training to education majors in computer science. This would increase recurring expenses of the SCDE by an additional \$1,501,600 beginning in FY 2024-25.

State Revenue

N/A

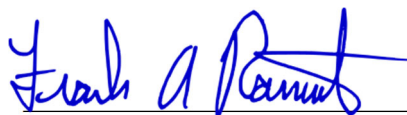
Local Expenditure

This bill requires each public high school and public charter high school to offer at least one computer science course that meets certain criteria by the beginning of the 2024-25 school year. The overall expenditure impact of this bill on local school districts will vary. SCDE surveyed the

seventy-three regular school districts and three charter school districts and received responses from twenty-nine districts. Twelve of the responding districts indicate that the bill will have no expenditure impact. Four districts anticipate the need to hire additional computer science instructors, purchase equipment and other supplies, develop new curricula, and provide additional training and professional development but report that the cost is currently undetermined. The thirteen remaining districts indicate that implementing the provisions of the bill will increase expenses by an amount ranging from \$2,500 to \$5,010,325 beginning in FY 2024-25. Ten of these districts anticipate the need to hire additional instructors. Several districts also report the need to purchase equipment and instructional materials, develop curricula, and provide training and professional development. Additionally, some districts anticipate that the provisions of the bill may increase expenses in elementary and middle schools, in addition to high schools.

Local Revenue

N/A



Frank A. Rainwater, Executive Director