

Department of Legislative Services
 Maryland General Assembly
 2022 Session

FISCAL AND POLICY NOTE
Third Reader - Revised

Senate Bill 753

(Senator Hester)

Finance and Budget and Taxation

Appropriations

Education and Labor and Employment - Cyber Warrior Diversity Program and Workforce Development for Cybersecurity

This bill establishes the Cybersecurity Workforce Accelerator Program in the Maryland Institute for Innovative Computing at the University of Maryland Baltimore County (UMBC) and the Cybersecurity Workforce Accelerator Fund, which is administered by the program. The purpose of the fund is to support innovative approaches to meeting cybersecurity workforce needs. The program must work with specified stakeholders to increase the cybersecurity workforce through targeted investments in educational opportunities, occupational training, and apprenticeship programs. The Department of Commerce and the Maryland Department of Labor (MDL) must assist in administering the accelerator program as necessary. The Governor must appropriate \$1.0 million for the fund in the fiscal 2024 budget, plus additional appropriations totaling \$5.95 million as specified for cybersecurity workforce development and educational programs. Additionally, the bill generally expands the Cyber Warrior Diversity Program (CWDP). **The bill takes effect July 1, 2022, and terminates June 30, 2024.**

Fiscal Summary

State Effect: No effect in FY 2023. General fund expenditures increase by \$6.95 million in FY 2024 to meet the bill’s mandated appropriations. Related effects, such as increased special fund and higher education revenues and expenditures, are discussed below. **This bill establishes mandated appropriations for FY 2024.**

(\$ in millions)	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027
ReimB Revenue	\$0	-	\$0	\$0	\$0
SF Revenue	\$0	\$2.45	\$0	\$0	\$0
Higher Ed Rev.	\$0	\$3.50	\$0	\$0	\$0
GF Expenditure	\$0	\$6.95	\$0	\$0	\$0
SF Expenditure	\$0	\$2.45	\$0	\$0	\$0
GF/SF/FF Exp.	\$0	-	\$0	\$0	\$0
Higher Ed Exp.	\$0	\$3.50	\$0	\$0	\$0
Net Effect	\$0.00	(\$6.95)	\$0.00	\$0.00	\$0.00

Note:() = decrease; GF = general funds; FF = federal funds; SF = special funds; - = indeterminate increase; (-) = indeterminate decrease

Local Effect: In FY 2024, revenues and expenditures increase for local governments, community colleges, and local boards of education, as discussed below.

Small Business Effect: Potential meaningful.

Analysis

Bill Summary: The accelerator program is required to:

- work with the Cybersecurity Association of Maryland, Inc. to expand, market, and coordinate existing State cybersecurity workforce programs;
- ensure that State cybersecurity workforce programs address the needs of the industry;
- develop a strategy to fill, by 2025, open cybersecurity positions in alignment with collected industry data;
- work with the federal Cybercorps Scholarship for Service Program to advertise positions and assist students with the application process;
- work with Commerce and major industry cybersecurity organizations to identify the needs of cybersecurity employers in the State as specified;
- work with the Maryland State Department of Education (MSDE) to establish a summer K-12 teacher externship grant program for teachers, as specified, and develop and invest in educational and career pathways in cybersecurity;
- work with MDL to grow the Maryland Employment Advancement Right Now (EARN) for cybersecurity programs and the State’s apprenticeship and training program for cybersecurity workforce development;
- work with appropriate partners to provide cybersecurity range training at all levels; and
- expand the Maryland Technology Internship Program (MTIP) to include local governments.

The bill establishes the purposes of the accelerator program. UMBC, in conjunction with MDL and Commerce, must submit a report on the operation and performance of the accelerator program to the Governor and the General Assembly by December 1, 2023. The bill establishes legislative intent that, in administering the program, UMBC must work with the Cybersecurity Association of Maryland, Inc.’s workforce development committee and use the Talent Pipeline Management approach codified by the U.S. Chamber of Commerce Foundation. It is also the General Assembly’s intent that any money invested in training programs in the Accelerator Program may be used to serve as matching funds for the purpose of applying for any available federal Build Back Better funds of the U.S. Economic Development Administration.

Mandated Appropriations

In addition to the \$1.0 million mandated appropriation to the fund in fiscal 2024, the Governor must include in the fiscal 2024 budget bill an appropriation of:

- \$1.0 million to the Maryland EARN for cybersecurity programs and administrative support;
- \$450,000 to UMBC to fund the accelerator program, including \$250,000 to manage the development of individuals who can meet cybersecurity workforce needs;
- \$2.5 million to CWDP;
- \$500,000 to fund the summer K-12 teacher externship grant program required under the bill;
- \$500,000 for the University System of Maryland (USM) to develop cyber range scenarios based on industry demand;
- \$500,000 to fund cybersecurity and online safety skills in elementary and secondary education; and
- \$500,000 for MTIP.

The appropriations required under the bill are supplemental and not intended to supplant funding that otherwise would be appropriated for those purposes.

Cybersecurity Workforce Accelerator Fund

The Cybersecurity Workforce Accelerator Fund is a special, nonlapsing fund that may only be used for the administration of the accelerator program and providing grants to elementary and secondary schools, institutions of higher education (including community colleges), and nonprofit organizations to operate cybersecurity workforce development programs based on the strategic plan of the accelerator program for cybersecurity workforce development. Any interest earnings of the fund must be credited to the general fund.

Cyber Warrior Diversity Program

By July 1, 2023, the Maryland Higher Education Commission (MHEC), in consultation with the Cyber Security Association of Maryland, Inc., must identify certification trends in information technology (IT) and cybersecurity sectors and, if applicable, expand CWDP to accommodate any changes in certification trends. At the end of each fiscal year, any unexpended funds allocated by MHEC under the program must revert to MHEC to be allocated for the upcoming fiscal year and be used to supplement, but not supplant, MHEC required appropriations for the upcoming year. The bill repeals the requirement that MHEC annually allocate funds to Baltimore City Community College (BCCC), Bowie State University (BSU), Coppin State University (CSU), Morgan State University (MSU), the

University of Maryland Eastern Shore (UMES), and the UMBC Training Centers on a *pro rata* basis according to the most recent enrollment data. As for the rest of the bill, these changes terminate June 30, 2024, and the *pro rata* distribution is restored for fiscal 2025 and beyond.

Current Law: Chapter 683 of 2021 codified the Center for Cybersecurity at UMBC and required the Governor to appropriate \$3.0 million for the center annually beginning in fiscal 2023. The Center for Cybersecurity is housed within the College of Engineering and Information Technology at UMBC. The center provides interdisciplinary academic and research leadership, partnership, innovation, and outreach by streamlining academic research, workforce development, and technology incubation activities related to cybersecurity. By October 1 each year, the center must report on the use of State funds in the field of cybersecurity.

Division of Workforce Development and Adult Learning

The Division of Workforce Development and Adult Learning (DWDAL) in MDL oversees the EARN program and State apprenticeship programs.

The EARN program was established in 2013 to create industry-led partnerships to advance the skills of the State's workforce, grow the State's economy, and increase sustainable employment for working families. Specifically, the program provides general fund grants on a competitive basis for industry partnerships, workforce training programs, and job-readiness and skills training. Since fiscal 2018, EARN has received annual funding specifically for cyber and IT. DWDAL currently funds 17 active cyber/IT Strategic Industry Partnerships across the State.

Cyber Warrior Diversity Program

CWDPs are located at BCCC, BSU, CSU, MSU, UMES, and UMBC Training Centers to train students in computer networking and cybersecurity, including training to achieve specified CompTIA certifications. For fiscal 2020, and each fiscal year thereafter, the Governor must include an annual appropriation of \$2.5 million for MHEC to provide grants to BCCC, BSU, CSU, MSU, UMES, and UMBC Training Centers for their CWDPs. MHEC must annually allocate funds to those institutions on a *pro rata* basis according to the most recent enrollment data for each institution's CWDP as reported to the commission. This funding must supplement, but not supplant, any funds that would otherwise be provided for each institution.

Maryland Technology Internship Program

Chapter 652 of 2014 created MTIP to increase student understanding of employment opportunities in the State and foster business retention and development, job creation, SB 753/ Page 4

workforce development, and new investment in the State. UMBC and Commerce must collaborate to utilize an Internet site through which (1) students may learn about technology-based businesses and internship opportunities and (2) technology-based businesses may register, post information about internship opportunities, and apply for reimbursement of internship stipends.

The Governor must include in the State budget funds for the reimbursement of the stipends and for UMBC to administer the program. Money awarded may be used to reimburse a technology-based business, State agency, or local governments up to 50% of a stipend paid to an intern, capped at \$3,000 annually for each intern.

UMBC and Commerce must also (1) develop application and registration requirements; (2) develop orientation and training programs for program participants; (3) review applications and award reimbursements of internship stipends; (4) provide opportunities for students to meet entrepreneurs, visit technology-related industry incubators, and learn about starting a business in the State; (5) provide recruitment and training opportunities and support for participating businesses; and (6) track and assess program outcomes.

Eligibility requirements for individuals generally focus on in-state or out-of-state enrollment in an institution of higher education, grade point average, and history of military service. Eligible individuals must commit to working a minimum of 120 hours during a spring, fall, or summer semester; attend an orientation session provided or approved by UMBC; and meet any other criteria established by UMBC.

To qualify for participation in MTIP, a business, which includes nonprofit organizations, must (1) be located in the State; (2) be a technology-based business; (3) commit to hosting an intern for a minimum of 120 hours during a spring, fall, or summer semester; (4) provide a detailed description of an intern position with the business; and (5) provide proof that a representative has attended an orientation or training program provided or approved by UMBC. “Technology-based business” is defined as a commercial or an industrial enterprise that is engaged in the application of scientific knowledge to practical purposes in a particular field. In addition, units of State and local governments may register to participate in the program. At least 50% of the internships supported by the program each year must be with businesses that have no more than 150 employees.

Career and Technical Education Committee

Chapter 36 of 2021 (Blueprint for Maryland’s Future – Implementation) created the Career and Technical Education (CTE) Committee as a unit within the Governor’s Workforce Development Board. The purpose of the committee is to build an integrated, globally competitive framework for providing CTE to Maryland students in public schools, postsecondary institutions, and the workforce. One of Maryland’s CTE programs of study is IT, with cybersecurity being an increasingly important part of IT programs.

State Fiscal Effect: The Governor must appropriate \$1.0 million for the Cybersecurity Workforce Accelerator Fund in the annual budget bill for fiscal 2024, and the Governor must make additional annual appropriations totaling \$5.95 million as specified for cybersecurity workforce and educational programs, as shown in **Exhibit 1**. The effects of these appropriations are discussed below. The bill’s mandated appropriations are supplemental to existing funding, so ongoing funding cannot offset the bill’s mandated appropriations.

**Exhibit 1
Mandated Appropriations
Fiscal 2024**

Bill Reference	Appropriation	FY 2024
(E)10	Accelerator Fund	\$1,000,000
(G)(1)	EARN Program	1,000,000
(G)(2)	UMBC Accelerator Program	450,000
(G)(3)	Cyber Warrior Diversity Program	2,500,000
(G)(4)	K-12 Teacher Externship	500,000
(G)(5)	USM Cyber Range Scenarios	500,000
(G)(6)	Education Opportunities	500,000
(G)(7)	MTIP	500,000
	Total	\$6,950,000

MTIP: Maryland Technology Internship Program
 UMBC: University of Maryland Baltimore County
 USM: University System of Maryland

Source: Department of Legislative Services

Cybersecurity Workforce Accelerator Program

The fiscal 2023 budget, as enacted, includes \$1.0 million over two years to establish the Maryland Institute for Innovative Computing at UMBC to accelerate innovation in computing, especially in cybersecurity, artificial intelligence, and data science and \$3.9 million as mandated in Chapter 683 of 2021, of which \$3.0 million is to establish the Center for Cybersecurity and \$0.9 million is for funding guideline attainment. This analysis assumes existing staff and funds for UMBC are used in fiscal 2023 to create the framework

for the accelerator program, with the program becoming fully operational in fiscal 2024 only, when the mandated funding occurs.

In accordance with the bill’s mandated appropriation, general fund expenditures for the Cybersecurity Workforce Accelerator Program at UMBC increase by \$2.45 million in fiscal 2024. Special fund revenues and expenditures increase correspondingly. General fund revenues increase minimally from interest earned on the new special fund.

The Cybersecurity Workforce Accelerator Fund includes \$1.0 million in fiscal 2024, which may only be used for administering the accelerator program and for providing grants to elementary and secondary schools, institutions of higher education, and nonprofit organizations to operate cybersecurity workforce development programs. Additionally, the accelerator program includes an appropriation of (1) \$450,000 of which \$250,000 is for managing the development of individuals who can meet cybersecurity workforce needs; (2) \$500,000 for K-12 teach externship grants; and (3) \$500,000 to fund cybersecurity and online safety skills in elementary and secondary education. UMBC estimates hiring a contractual coordinator, a contractual IT technical trainer, a contractual career center employee for conducting K-12 outreach, and a part-time contractual business manager. The estimate includes salaries, fringe benefits, one-time start-up costs, and ongoing operating expenses.

Contractual Positions	3.5
Salaries and Fringe Benefits	\$216,191
Accelerator Fund Grants	1,203,907
K-12 Externship Grants	500,000
Funds for Cybersecurity and Online Safety Skills	500,000
Operating Expenses	<u>29,902</u>
Total FY 2024 State Expenditures	\$2,450,000

Contractual staff is appropriate as the program and fund terminate June 30, 2024. This estimate does not include any health insurance costs that could be incurred for specified contractual employees under the State’s implementation of the federal Patient Protection and Affordable Care Act.

Nevertheless, while operational, the accelerator program must work with MSDE to establish a summer K-12 externship grant program and develop and invest in educational and career pathways in cybersecurity. This analysis assumes the funds for these purposes are disbursed to the accelerator program, as shown above. MSDE advises that it currently has a career pathway in cybersecurity and collaborates with the Maryland Chamber of Commerce to implement a teacher externship program, so the bill does not change how MSDE operates, and MSDE can provide assistance to the accelerator program with existing staff.

Commerce can use existing staff to assist in administering the accelerator program.

Cyber Range Scenarios

The bill mandates a \$500,000 appropriation in fiscal 2024 for USM to develop cyber range scenarios based on industry demand, so general fund expenditures for USM increase by \$500,000 in fiscal 2024, and higher education revenues and expenditures increase correspondingly. USM may need additional contractual personnel to develop the scenarios, but any personnel expenses are taken from the bill's mandated appropriation.

Cyber Warrior Diversity Program

The fiscal 2023 budget, as enacted, includes \$2.5 million for CWDP in MHEC. The bill mandates an additional appropriation of \$2.5 million in the fiscal 2024 budget for MHEC to provide grants to BCCC, BSU, CSU, MSU, UMES, and UMBC Training Centers for their CWDPs. Thus, general fund expenditures increase by \$2.5 million in fiscal 2024. Higher education revenues and expenditures for BCCC, BSU, CSU, MSU, UMES, and UMBC Training Centers increase by a total of \$2.5 million in fiscal 2024. The amount available to each institution depends on its share of total enrollment for CWDPs as reported to MHEC and may change from year to year. To the extent that the CWDPs at the institutions increase enrollment, tuition revenues increase further. MHEC can administer the grants and identify certification trends in information and technology sectors with existing staff.

The bill allows any unexpended funds allocated by MHEC in either fiscal 2023 or 2024 to revert to the commission for reallocation the following year. Any such impact has not been accounted for in this analysis.

Maryland Technology Internship Program

The fiscal 2023 budget, as enacted, includes \$350,000 for MTIP at UMBC. General fund expenditures increase by \$500,000 in fiscal 2024 to meet the bill's mandated appropriation to MTIP. The accelerator program is required to expand MTIP to include local governments, but local governments are already included in the program. Reimbursable fund revenues for multiple State agencies increase minimally in fiscal 2024 from internship reimbursements from UMBC. State expenditures (all funds) for technology internships increase minimally to the extent that the bill results in internships that would otherwise not have been created.

Maryland Department of Labor

The fiscal 2023 budget, as enacted, includes \$9.1 million for grants through the EARN program, of which funding for EARN cyber programs increases by \$1.0 million to

\$3.8 million. MDL expects that this enhanced funding for cyber programs in fiscal 2023 will provide training to approximately 150 additional individuals.

General fund expenditures for DWDAL in MDL increase by \$1.0 million in fiscal 2024, reflecting the bill’s mandated appropriations of \$1.0 million to the EARN cyber program. DWDAL is staffed largely with federally funded personnel who cannot work on State-funded programs without the program reimbursing the federal government for their time. The bill authorizes the use of the mandated funding for program administration, so the costs of administering the program is taken from the mandated appropriation. Thus, general fund expenditures increase by \$1.0 million in fiscal 2024, which reflects the cost of hiring one contractual EARN program manager to administer the additional funds under the program, along with program funding and reimbursing existing federally funded personnel. The estimate includes a salary, fringe benefits, one-time start-up costs, and ongoing operating expenses.

Contractual Position	1.0
Federally Funded Salaries and Fringe Benefits	\$72,372
Contractual Salary and Fringe Benefits	65,846
Program Funding	834,191
Operating Expenses	<u>27,591</u>
Total FY 2024 State Expenditures	\$1,000,000

Contractual staff is appropriate as the additional funding is available for only one year. This estimate does not include any health insurance costs that could be incurred for specified contractual employees under the State’s implementation of the federal Patient Protection and Affordable Care Act.

Effect on Higher Education Formulas

The total State appropriation for selected public four-year institutions, which includes UMBC, is used to calculate the statutory funding amounts for the Senator John A. Cade (local community colleges) and the Joseph A. Sellinger (independent institutions) funding formulas. To the extent that the bill affects funding used for these formulas, general fund expenditures increase for these formulas in fiscal 2024. Actual funding depends on enrollment and the actual distribution of funds.

Local Fiscal Effect: Local community college revenues and expenditures may increase due to any additional State aid under the Senator John A. Cade Funding Formula in fiscal 2024.

Revenues and expenditures for local boards of education may increase in fiscal 2024 to the extent that they receive grants to operate cybersecurity workforce development programs.

Local governments may benefit from the expansion of MTIP. Local revenues increase minimally in fiscal 2024 from stipend reimbursements. Local expenditures increase minimally to the extent that the bill results in internships that would otherwise not have been created.

Small Business Effect: Small cybersecurity companies, or small businesses that have a need for cybersecurity services, may benefit from increased coordination by State entities regarding cybersecurity workforce development and from a potentially larger cybersecurity workforce. Small businesses may also benefit from the expansion of the MDL program. The bill may bolster a more skilled and prepared cybersecurity workforce to meet the staffing demands of small businesses.

Eligible technology-based small businesses may benefit from MTIP receiving additional funds in fiscal 2024, as more small businesses could qualify to host eligible interns and receive up to \$3,000 per intern in State funds to be used to pay intern stipends. However, to receive the State funds, the small business must at least match that amount.

Additional Comments: Eligible private, nonprofit institutions may receive additional State aid through the Sellinger formula in fiscal 2024 if the bill affects funding used for that formula.

Additional Information

Prior Introductions: None.

Designated Cross File: HB 1334 (Delegate Kerr) - Appropriations.

Information Source(s): Department of Commerce; Maryland State Department of Education; University System of Maryland; Department of Budget and Management; Maryland Higher Education Commission; Maryland Department of Labor; Department of Legislative Services

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