ASSEMBLY, No. 6103

STATE OF NEW JERSEY

219th LEGISLATURE

INTRODUCED DECEMBER 2, 2021

Sponsored by:
Assemblyman RAJ MUKHERJI
District 33 (Hudson)

SYNOPSIS
   Requires instruction on cybersecurity in grades nine through 12; requires Office of Secretary of Higher Education to develop cybersecurity model curricula; establishes loan redemption programs for individuals in certain cybersecurity occupations.

CURRENT VERSION OF TEXT
   As introduced.

1　AN ACT concerning cybersecurity curricula, degree programs, and
2　　loan redemption programs, and supplementing Title 18A of the
3　　New Jersey Statutes.
4
5　　**BE IT ENACTED** *by the Senate and General Assembly of the State*
6　*of New Jersey:*
7
8　　1. As used in sections 2 and 3 of P.L.　, c.　(C.　) (pending
9　before the Legislature as this bill), "cybersecurity" means the
10　practice of defending computers, servers, mobile devices, electronic
11　systems, networks, and data from criminal or unauthorized use or
12　attacks.
13
14　　2. A school district shall incorporate instruction on
15　cybersecurity in an appropriate place in the curriculum of students
16　in each of the grades nine through 12 as part of the district's
17　implementation of the New Jersey Student Learning Standards in
18　Computer Science and Design Thinking. The instruction shall be
19　based on the curriculum guidelines established by the
20　Commissioner of Education pursuant to section 3 of P.L.　, c.
21　(C.　) (pending before the Legislature as this bill). The
22　instruction shall be included in the curriculum for each grade in a
23　manner adapted to the age and understanding of the students and
24　shall provide a thorough and comprehensive treatment of the
25　subject.
26
27　　3. a. The Commissioner of Education, in consultation with the
28　Office of Homeland Security and Preparedness and the New Jersey
29　Cybersecurity and Communications Integration Cell, shall develop
30　curriculum guidelines to assist school districts in implementing the
31　instruction on cybersecurity required pursuant to section 2 of
32　P.L.　, c.　(C.　) (pending before the Legislature as this bill).
33　The guidelines shall provide for a sequential course of study for
34　each of the grades nine through 12, and shall include, but need not
35　be limited to, the following:
36　　(1) an introduction to the field of cybersecurity and definitions
37　of terms frequently used in the field of cybersecurity;
38　　(2) information concerning the proper and safe use of the
39　Internet as well as strategies to detect solicitations of private or
40　personal information from bad actors and how to protect private or
41　personal information;
42　　(3) an overview of the fundamentals of computer hardware and
43　software as well as information on various computer operating
44　systems;
45　　(4) a summary of the basic and advanced skills needed to be
46　successful in the field of cybersecurity, including computer
47　networking and coding;

1   (5) examples of research projects and other applied activities
2 relating to cybersecurity that school districts may offer to students;
3 and
4   (6) information concerning post-secondary opportunities in the
5 field of cybersecurity as well as other career pathways a student
6 may pursue in the field of cybersecurity.
7   The guidelines shall include model instructional units, define
8 learning objectives, and recommend instructional materials suitable
9 for each of the grades nine through 12.
10   b.   The guidelines developed pursuant to this section shall be
11 reviewed annually and shall be updated as appropriate to ensure that
12 the guidelines and the instruction on cybersecurity required
13 pursuant to section 2 of P.L.   , c.   (C.   ) (pending before the
14 Legislature as this bill) reflects the most current information
15 available on the field of cybersecurity.
16
17   4. a. No later than one year following the date of enactment of
18 P.L.   , c.   (C.   ) (pending before the Legislature as this bill),
19 the Office of the Secretary of Higher Education, in consultation
20 with the Department of Labor and Workforce Development, the
21 Economic Development Authority, the Office of Homeland Security
22 and Preparedness, and the New Jersey Presidents' Council, shall
23 develop a cybersecurity model curriculum for use by four-year
24 institutions of higher education in the State and a cybersecurity
25 model curriculum for use by county colleges in the State.   The
26 model curricula developed pursuant to this subsection shall be made
27 available to assist four-year institutions of higher education and
28 county colleges that intend to develop cybersecurity-related degree
29 programs.
30   b.   The cybersecurity model curricula developed pursuant to
31 subsection a. of this section shall account for academic quality and
32 other applicable standards required for accreditation of
33 cybersecurity-related degree programs. The model curricula shall,
34 at a minimum:
35   (1) provide a comprehensive sequence of courses that will
36 ensure adequate preparation for further postsecondary education or
37 a career in the field of cybersecurity;
38   (2) include a list of courses that would be suitable for
39 cybersecurity-related degree programs;
40   (3) detail any requirements, other than coursework, that may be
41 part of cybersecurity-related degree programs; and
42   (4) detail overall expected student outcomes for cybersecurity-
43 related degree programs as well as expected student outcomes for
44 individual cybersecurity courses.
45   c.   As part of the development of the cybersecurity model
46 curricula required pursuant to subsection a. of this section, the
47 Department of Labor and Workforce Development and the
48 Economic Development Authority, in consultation with the New

1 Jersey Presidents' Council, shall develop and distribute to
2 institutions of higher education cybersecurity career pathway
3 marketing materials that provide descriptions of cybersecurity
4 careers and the benefits of pursuing such careers.
5   d. As used in this section, "cybersecurity" means the practice
6 of defending computers, servers, mobile devices, electronic
7 systems, networks, and data from criminal or unauthorized use or
8 attacks.
9

10   5. As used in sections 6 through 9 of P.L.   , c.   (C.   )
11 (pending before the Legislature as this bill):
12   "Approved   cybersecurity   degree   program"   means   an
13 undergraduate or advanced degree program, approved by the Higher
14 Education Student Assistance Authority, for persons engaged in a
15 cybersecurity occupation approved by the Higher Education Student
16 Assistance Authority pursuant to subsection a. of section 6 of
17 P.L.   , c.   (C.   )(pending before the Legislature as this bill).
18   "Authority" means the Higher Education Student Assistance
19 Authority.
20   "Cybersecurity" means the practice of defending computers,
21 servers, mobile devices, electronic systems, networks, and data
22 from criminal or unauthorized use or attacks.
23   "Eligible qualifying loan expenses" means the cumulative
24 outstanding balance of qualifying student loans, including interest
25 paid or due, covering the cost of attendance at an institution of
26 higher education for an undergraduate or advanced degree from an
27 approved cybersecurity degree program.
28   "Executive director" means the executive director of the Higher
29 Education Student Assistance Authority.
30   "Program" means the Cybersecurity Loan Redemption Program
31 established pursuant to section 6 of P.L.   , c.   (C.   ) (pending
32 before the Legislature as this bill).
33   "Program participant" means a person who contracts with the
34 authority to engage in a cybersecurity occupation in exchange for
35 the redemption of eligible qualifying loan expenses provided under
36 the program.
37   "Qualifying student loan" means a State or federal loan for the
38 actual costs paid for tuition and reasonable education and living
39 expenses   relating   to   obtaining   a   degree   in   an   approved
40 cybersecurity degree program.
41   "Total and permanent disability" means a physical or mental
42 disability that is expected to continue indefinitely or result in death
43 and renders a program participant unable to perform that person's
44 employment obligation, as determined by the executive director or
45 the executive director's designee.
46

47   6. a. There is established within the Higher Education Student
48 Assistance Authority a Cybersecurity Loan Redemption Program.

1   The program shall provide $1,000 to program participants for each
2   year of employment in a cybersecurity occupation approved by the
3   executive director of the authority, up to a maximum of four years,
4   for the redemption of a portion of eligible qualifying loan expenses.
5   The executive director shall annually post on the authority's
6   Internet website a list of approved cybersecurity occupations that
7   will qualify for loan redemption under the program.
8   b. A person seeking loan redemption under the program shall
9   submit an application to the authority pursuant to application
10 guidelines and procedures established by the authority. To be
11 eligible to participate in the Cybersecurity Loan Redemption
12 Program, an applicant shall:
13   (1) be a resident of the State and maintain residency during
14 program participation;
15   (2) be a graduate of an approved cybersecurity degree program
16 at an institution of higher education located in New Jersey;
17   (3) have an outstanding balance on a qualifying student loan and
18 not be in default on any qualifying student loan;
19   (4) be employed in an approved cybersecurity occupation with
20 an employer located in the State; and
21   (5) satisfy any additional criteria the authority may establish.
22
23   7. a. The executive director or the executive director's designee
24 shall select the program participants from among those applicants
25 who meet the eligibility criteria established pursuant to section 6 of
26 P.L.   , c.   (C.   ) (pending before the Legislature as this bill),
27 subject to the availability of funds appropriated or otherwise made
28 available to the program.
29   b. A person who meets the eligibility requirements under section
30 6 of P.L.   , c.   (C.   ) (pending before the Legislature as this
31 bill) and has been selected by the executive director or the
32 executive director's designee for participation in the program shall
33 enter into a written contract with the authority. The contract shall
34 specify the dates of required employment by the program
35 participant in an approved cybersecurity occupation and shall
36 require the program participant to serve at least one year in an
37 approved cybersecurity occupation.
38   c. Prior to the annual redemption of loan indebtedness, the
39 program participant shall submit to the authority certification of
40 full-time employment in an approved cybersecurity occupation for
41 the full year period with an employer located in the State.
42   d. A program participant, as a condition of participation, shall be
43 required to adhere to performance standards established by the
44 executive director or the executive director's designee.
45   e. A program participant shall be eligible for participation in the
46 program for no more than four years.

1   8. a. A program participant who has previously entered into a
2 contract with the authority may nullify the agreement by notifying
3 the authority in writing and reassuming full responsibility for the
4 remaining outstanding balance of the loan debt. In no event shall
5 employment for less than the full calendar year entitle the program
6 participant to any benefits under the program.
7   b. In the case of a program participant's death or total and
8 permanent disability, the authority shall nullify the employment
9 obligation of the program participant. The nullification shall
10 terminate the authority's obligations under the loan redemption
11 contract. When continued enforcement of the contract may result in
12 extreme hardship, the authority may nullify or suspend the
13 employment obligation of the program participant.
14   c. In the case of a program participant's conviction of a crime
15 or an act of gross negligence in the performance of employment
16 obligations, or a program participant's breach of the standards
17 established pursuant to subsection d. of section 7 of P.L.   , c.
18 (C.   )(pending before the Legislature as this bill) act, the
19 executive director or the executive director's designee is authorized
20 to terminate the program participant's participation in the program.
21
22   9. A person who knowingly or willfully furnishes any false or
23 misleading information for the purpose of receiving loan
24 redemption benefits under the program is guilty of a crime of the
25 fourth degree.
26
27   10. As used in sections 11 through 14 of P.L.   , c.
28 (C.   )(pending before the Legislature as this bill):
29   "Authority" means the Higher Education Student Assistance
30 Authority.
31   "Cybersecurity" means the practice of defending computers,
32 servers, mobile devices, electronic systems, networks, and data
33 from criminal or unauthorized use or attacks.
34   "Eligible qualifying loan expenses" means the cumulative
35 outstanding balance of qualifying student loans, including interest
36 paid or due, covering the cost of attendance at an institution of
37 higher education for an undergraduate or advanced degree from an
38 approved cybersecurity degree program.
39   "Executive director" means the executive director of the Higher
40 Education Student Assistance Authority.
41   "Program" means the Cybersecurity Teacher Loan Redemption
42 Program established pursuant to section 11 of P.L. , c. (C.   )
43 (pending before the Legislature as this bill).
44   "Program participant" means a person who contracts with the
45 authority to engage in service as a teacher in a cybersecurity-related
46 subject matter in exchange for the redemption of eligible qualifying
47 loan expenses provided under the program.

1   "Qualifying student loan" means a State or federal loan for the
2 actual costs paid for tuition and reasonable education and living
3 expenses relating to obtaining a degree in an approved
4 cybersecurity degree program.
5   "Total and permanent disability" means a physical or mental
6 disability that is expected to continue indefinitely or result in death
7 and renders a program participant unable to perform that person's
8 employment obligation, as determined by the executive director or
9 the executive director's designee.
10
11   11. a. There is established within the Higher Education Student
12 Assistance Authority a Cybersecurity Teacher Loan Redemption
13 Program. The program shall provide $1,000 to program
14 participants for each year of service as a teacher in a cybersecurity-
15 related subject matter, as determined by the executive director of
16 the authority, up to a maximum of four years, for the redemption of
17 a portion of eligible qualifying loan expenses. The executive
18 director shall annually post on the authority's Internet website a list
19 of approved cybersecurity-related subject matters that will qualify
20 for loan redemption under the program.
21   b. A person seeking loan redemption under the program shall
22 submit an application to the authority pursuant to application
23 guidelines and procedures established by the authority. To be
24 eligible to participate in the Cybersecurity Teacher Loan
25 Redemption Program, an applicant shall:
26   (1) be a resident of the State and maintain residency during
27 program participation;
28   (2) be a teacher of an approved cybersecurity-related subject
29 matter, who is employed by a school district, charter school, or
30 renaissance school project in the State;
31   (3) have an outstanding balance on a qualifying student loan and
32 not be in default on any qualifying student loan; and
33   (4) satisfy any additional criteria the authority may establish.
34
35   12. a. The executive director or the executive director's designee
36 shall select the program participants from among those applicants
37 who meet the eligibility criteria established pursuant to section 11
38 of P.L.   , c.   (C.   ) (pending before the Legislature as this
39 bill), subject to the availability of funds appropriated or otherwise
40 made available to the program.
41   b. A person who meets the eligibility requirements under section
42 11 of P.L.   , c.   (C.   ) (pending before the Legislature as this
43 bill) and has been selected by the executive director or the
44 executive director's designee for participation in the program shall
45 enter into a written contract with the authority. The contract shall
46 specify the dates of required service by the program participant as a
47 teacher in an approved cybersecurity-related subject matter and

1 shall require the program participant to serve at least one year as a
2 teacher in an approved cybersecurity-related subject matter.
3   c. Prior to the annual redemption of loan indebtedness, the
4 program participant shall submit to the authority certification of
5 employment in a school district, charter school, or renaissance
6 school as a teacher of an approved cybersecurity-related subject
7 matter for the full school year period.
8   d. A program participant, as a condition of participation, shall be
9 required to adhere to performance standards established by the
10 executive director or the executive director's designee.
11   e. A program participant shall be eligible for participation in
12 the program for no more than four years.
13
14   13. a. A program participant who has previously entered into a
15 contract with the authority may nullify the agreement by notifying
16 the authority in writing and reassuming full responsibility for the
17 remaining outstanding balance of the loan debt. In no event shall
18 employment for less than the full school year entitle the program
19 participant to any benefits under the program.
20   b. In the case of a program participant's death or total and
21 permanent disability, the authority shall nullify the employment
22 obligation of the program participant. The nullification shall
23 terminate the authority's obligations under the loan redemption
24 contract. When continued enforcement of the contract may result in
25 extreme hardship, the authority may nullify or suspend the
26 employment obligation of the program participant.
27   c. In the case of a program participant's conviction of a crime
28 or an act of gross negligence in the performance of employment
29 obligations, or a program participant's breach of the standards
30 established pursuant to subsection d. of section 12 of P.L.   , c.
31 (C.   ) (pending before the Legislature as this bill), the executive
32 director or the executive director's designee is authorized to
33 terminate the program participant's participation in the program.
34
35   14. A person who knowingly or willfully furnishes any false or
36 misleading information for the purpose of receiving loan
37 redemption benefits under the program is guilty of a crime of the
38 fourth degree.
39
40   15. The State Board of Education shall promulgate rules and
41 regulations pursuant to the "Administrative Procedure Act,"
42 P.L.1968, c.410 (C.52:14B-1 et seq.), necessary to effectuate the
43 provisions of sections 1 through 3 of P.L.   , c. (C.   ) (pending
44 before the Legislature as this bill). The Higher Education Student
45 Assistance Authority shall promulgate rules and regulations
46 pursuant to the "Administrative Procedure Act," P.L.1968, c.410
47 (C.52:14B-1 et seq.), necessary to implement the provisions of
48 sections 5 through 9 of P.L.   , c. (C.   ) (pending before the

1 Legislature as this bill). The authority, in consultation with the
2 Department of Education, shall promulgate rules and regulations
3 pursuant to the "Administrative Procedure Act," P.L.1968, c.410
4 (C.52:14B-1 et seq.), necessary to implement the provisions of
5 sections 10 through 14 of P.L. , c. (C.   ) (pending before the
6 Legislature as this bill).
7
8 16. This act shall take effect immediately and sections 1 through
9 3 shall first apply in the first full school year following the date of
10 enactment.
11
12
13   STATEMENT
14
15 This bill requires school districts to incorporate instruction on
16 cybersecurity in an appropriate place in the curriculum of students
17 in each of the grades nine through 12. The instruction will be based
18 on curriculum guidelines established under the bill by the
19 Commissioner of Education in consultation with the Office of
20 Homeland Security and Preparedness and the New Jersey
21 Cybersecurity and Communications Integration Cell. The
22 curriculum guidelines would provide for a sequential course of
23 study for each of the grades nine through 12 and include various
24 introductory concepts and activities related to cybersecurity.
25 Under the bill, the Office of the Secretary of Higher Education,
26 in consultation with the Department of Labor and Workforce
27 Development, the Economic Development Authority, the Office of
28 Homeland Security and Preparedness, and the New Jersey
29 Presidents' Council, would develop a cybersecurity model
30 curriculum for use by four-year institutions of higher education in
31 the State and a cybersecurity model curriculum for use by county
32 colleges in the State. The model curricula developed pursuant
33 would assist four-year institutions of higher education and county
34 colleges in developing cybersecurity-related degree programs. The
35 Department of Labor and Workforce Development and the
36 Economic Development Authority, in consultation with the New
37 Jersey Presidents' Council, are required to develop and distribute to
38 institutions of higher education cybersecurity career pathway
39 marketing materials that provide descriptions of cybersecurity
40 careers and the benefits of pursuing such careers.
41 The bill also creates two student loan redemption programs for
42 individuals seeking careers in cybersecurity-related roles. The
43 Cybersecurity Loan Redemption Program would provide $1,000 to
44 program participants for each year of employment in a
45 cybersecurity occupation approved by the Executive Director of the
46 Higher Education Student Assistance Authority, up to a maximum
47 of four years, for the redemption of a portion of eligible qualifying
48 loan expenses. Among other requirements enumerated in the bill, a

1   program participant is required to be graduate of an approved
2   cybersecurity degree program at an institution of higher education
3   located in New Jersey and be employed in an approved
4   cybersecurity occupation with an employer located in the State.

5   The second loan redemption program, the Cybersecurity Teacher
6   Loan Redemption Program, would similarly provide $1,000 to
7   program participants for each year of service as a teacher in a
8   cybersecurity-related subject matter, as determined by the
9   Executive Director of the Higher Education Student Assistance
10   Authority, up to a maximum of four years, for the redemption of a
11   portion of eligible qualifying loan expenses. Among other
12   requirements enumerated in the bill, a program participant is
13   required to be a teacher of an approved cybersecurity-related
14   subject matter, who is employed by a school district, charter school,
15   or renaissance school project in the State.